

1886

- GAGE

CHIRURGICAL



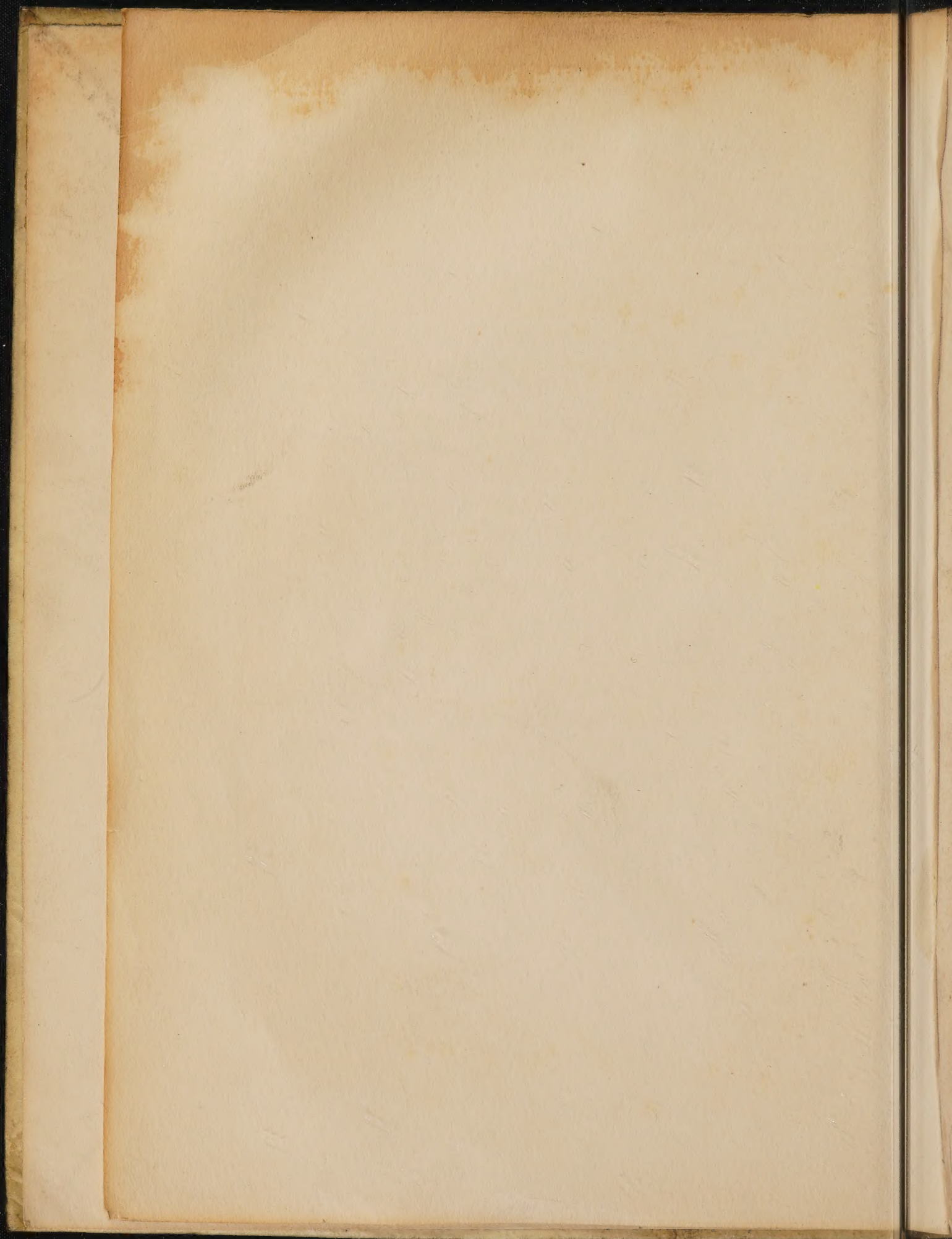




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CERTAINE
VWorkes of Chi-
rurgerie, newvlie

COMPILED AND PVB-
lished by THOMAS
GALE, Maister
in Chirurgerie.



LONDON

Printed by Thomas East, dwelling be-
twene Paules Wharfe and Bainards
Castle. 1586.

Payne
1586/1587

CERTAIN The Contents.

1. An Institution of Chirurgie. lib.i.
2. An Enchiridion, containing the cure of wounds, fractures, & dislocations. li.iiii.
3. An excellent treatise of the wound made with Gunshot, in which is confuted the grose opinion of Iohn Vigo, Brunswicke, Alfonsus Ferrius, and others. lib.i.
4. An Antidotarie containing the principall and secret medicines vsed in the arte of Chirurgie. lib.i.

Note that in the end of the Antidotarie are placed all the Tables belonging to the Institution of a Chirurgion.

Printed by Thomas East, dwelling between Pauls Church and Bannards Castle. 1688.

TO THE RIGHT HONORABLE THE

Lord Robert Dudley, Maister of the Queenes Maiesties
horse, Knight of the noble order, one of the most
honorable priuie Counsell, and his singular
good Lord and Maister, &c.

If that be true (right Honorable) which not onelie Ari-
stippus the Philosopher, but all other do confesse, y^e those
things are to be taught, practised, and maintained, which in
a common weale are most profitable and necessarie. Then
I may boldly without iust cause of reprehension affirme, y^e
Physick is not the least, but one of y^e principall to be taught,
practised, & had in honour and price. And because I wil not
further wade than my profession extendeth, I shall one-
lie touch the third part Therapeutike, called with vs Chi-
rurgerie. This part, whether for the antiquitie, as the most
auncient part of Physicke, or for the necessitie and vtilitie of
it, I should most commend, I cannot easilie iudge. But if
we shall beleue Cornelius Celsus, or the olde writers, we
must of force confesse it to be moze auncient than the other
two. For before the time of the Trojan wars, Chiron Cen-
taurus and Telyphus, were of great renowme and fame, be-
cause they had first found the art to cure certaine virulent &
maligne vlcers, (which after ward according to the names
of Chiron and Telyphus) were called Chironia & Telyphea
vlcera. In the time of the Troians mortall warre, Podaliri-
us and Machaon being vnder Agamemnon, did meruailous-
lie profit the souldiers in curing their wounds, taking out of
darts, and things in them fixed, and applying healthful plai-
sters and medicines to the wounded parts. What necessitie
is of Chirurgerie, or how much commoditie and profit by it
ensueth, let the ans were which are by the benefit of this art
deliuered from paine, preserved fro lesse & mutilation of me-
bers, & defended from death it selfe. But here I hold backe
my pen in further commending Chirurgerie, least it might
iustly be answered by your Lordship to me, as was to the
Sophist, who reciting a whole booke written in praise and
honour of Hercules, said, Who despiseth Hercules? So in like
sort your Honor might ans were, who despiseth Chirurgerie?

THE EPISTLE DEDICATORIE.

In deed (my good Lord) none despiseth it which are reasonable, & fewer enemies it shuld haue, if the professors theselues (in this our miserable time) were lesse grædie of money, & moze diligent to learne their art. And although the malice of other make me here to holde my peace, yet if I may craue your L. suppozation in so vertuous an enterprise, I shall not cease to set out some of the parts of Chirurgerie, & thereby the young and studious Surgions may be made the abler both to know & also to exercise their art. And therefore I haue made a booke, entituled: The Institution of a Chirurgeon, then I shew the a methodicall practise to cure wounds, fractures, & dislocations, in my booke called an Enchiridion of Chirurgerie. And for y I heare y many Surgions want knowledge of curing wounds made with gunshot (being now at Newhauen, vnder the right honourable L. Ambrose Earle of Warwicke, your honours most deere brother) I for their aide haue also compiled a treatise, containing the perfect cure of Gunshot. In which also I confute the errors of diuerse touching this question: whether the wound made w gunshot is venimous: last of all, because the young men for want of time haue not iudgement sufficient, either to choose out the best and most conuenient medicines, or else to compound new: I haue made mine Antidotarie, containing the principal & secret medicines vsed in Chirurgerie. In which I do not only set out such as the best wziters maketh mention of, & I by long experience haue found profitable, but also I do open diuerse new, & to other yet vnknownen, of my selfe inuented. Beseeching most humbly your L. to take these bookes (the first fruits of my labours) into your noble protection, and defend both them, & me the author, from the malice of busie detractors, & I shall not onelie haue other bookes which I haue by me vnfinished, but also as my dutie requireth, praie vnto the almightie for your Lordships long life, perfect health, & dailie increase in honour. At my poore house in London the 16. of Iulie. 1563.

Your Honors most humble and obedient seruant,
Thomas Gale Chirurgeon.

W. CVNINGHAM DOCTOR IN PHI-

sicke, vnto his approued friend Thomas Gale, Maister
in Chirurgie, salutations.

WHy cease you M. Gale? What keepeth back the publishing of your foure bookes, which with so great trauaile & perfect skil you haue so happily finished? Doth feare of Sicophants and detraeting tongues astoine you? Or the mistrust of seuerer iudgement at the learned, keep back your honest attēpt? Let these be no impediments I shal desire you, but banish feare, & put frō you mistrust. And as touching the maleuolēt detractors, it either needeth not, or helpeth not to stand of thē in dread. Apes will euer haue apish properties, with mocking, mowing, & grinning at euerie person do what you can. I my selfe haue somewhat tasted of their curtesie, and therefore can better vtter their nature vnto you. They be such as for the more part are ignorant thēselues, or if they beare the face of learning, yet be they arrogant & loiter in idlenesse, and therefore to maintaine their name, do carp & reprehend other mens good labors, thinking therby among the rude multitude to get thē more fame & honor. These haue not so much hindered me with their serpentine tongues, as made mee among the wise and learned of greater estimation. For although it be a cōmon saying, yet is it most true [*Virescit vulnere virtus.*] But wil you eschew their sting & poison? Be idle thē, loiter, regard neither your dutie to God, nor yet to your Countrie. This must of force be your shift, which how honest it is, be you the iudge your selfe. But you will saie peraduenture, you are armed against this sorte sufficientlie, not regarding their force, and yet you dreade the censure and iudgement of the graue & learned. Surelie these you need least of all other to feare: For like as Apes can do no thing but apishlie, so will the learned do nothing but learnedly, discretly, & with great aduise ment. They consider by their owne trauailes, that it is no trifling, but great paines to write in any arte or sciēce. And when they readē other mens labours, and finde perhaps some errors, they reiect not the worke, they deface not the author, but thinke with themselues, *Homini est errare*, And if the

errors be such, as are thought not tollerable, they will not cur-
rishlie checke, but curteouslie admonish, or else with their pen
speedely amend it. Seeing therfore that chattering Iaies may
not preuaile against you, and that I haue (as I suppose) deliue-
red you of the mistrust you had in the learned, defer no lon-
ger time, nor make no more delaies, but since your Coun-
trie craue it, your approued friends earnestlie looke for it, and
your dutie to both these require it, keepe these bookes no lon-
ger in darknesse, but let them tast of light. And as touching
your request in your letters sent to me, to peruse & read your
copies, to alter, change, and adde, as I shuld thinke good, I haue
somewhat satisfied your expectatiō herein. And first I see your
great diligence in reading your authors in Chirurgerie, as Bui-
nus, Theodoricus, Rolandus, Lanfrancus, Rogerus, Bartalpalia,
Guido de Cauliac, Wilhelmus, Ier. Brūswick, Vigo, & other.
And do also consider what great paine & difficultie it was,
to collect so perfect workes out of so imperfect authours, I
speake it not to their dispraise, they were in the time of igno-
rance. But in my simple iudgement, if the following of Galē,
Auicen, Mesue, & others, of whom in your bookes you make
so often mention, had not staied you, & your long experience
conducted, you shuld of force haue fallen into the huge pit of
cloudie and most grosse errors. Among which, these following
are not the greatest, but yet not sufferable in anie case. For
what man is so mad, knowing the nerues to be the cause of fee-
ling, will in wounds of the nerues bid stitch the same? Who is
so bold in great wounds in which there is fixed splents, shot,
arrow heads, and such like, to giue the patient sleepe drinks as
they call the? Who is so rude in wounds with Gunshot made
through a member, as to drawe an hearing rope through the
wound? Or what ignorance appeareth in the all, in confoun-
ding the names of diseases, and miscalling of simples? Dooth
not Guido the best of these authors rehearsed, call Oedema,
Vndimia? Erisipelas, Hirisipela? Scirrhus, Sliros? & that which
I most meruaile at, that he calleth Estiomenon (which is her-
pes exedens) mortem et dissipationem membri, and he inter-
preteth Estiomenon, quasi hominis hostem. How farre from
the matter it is, and how ridiculous an interpretation, let the lear-

learned iudge, I loath to write them, and repent the lost time
in reading them. But these for a tast I offer, whereby gentle
reader, thou maist the better iudge and esteeme the labours of
the author our countrie man, who for his Countries sake haue
spared no time to trauaile, nor regarded his great expēce. Yea,
and that which is more, not his feebled olde corps which is ve-
rie vnapt to take so great a thing in hand. This for my part I
dare boldly affirme, that neuer in English was so perfect works
in Chirurgerie set out, and I doubt whether in any other tōgue
there be in all points anie worke extant in Chirurgerie, which
with these may be compared. For if we shal looke first of his
Institution in Chirurgerie, how pithily, plainly, & compendi-
ously, doth he set out the whole bodie of the art, shewing the
definitions, diuisions, & also apt names of tumors against na-
ture, wounds, vlcers, fractures, dislocations, & other like? How
diligētie instructeth he the student in Chirurgerie, first in the
theorike and then in the practike part? Then the student be-
ing thus trained vp. & now made apt to practise, he sendeth
him to his Enchiridion, in which is set out the method of cu-
ring wounds both in the similer and instrumentall parts, and
also such apt medicines as are for them conuenient. He doth
moreouer shew the cure of such accidents as do often chance
to wounds. Last, he doth open the curing of fractures and dis-
locations. Furthermore, hee hath finished a treatise, of curing
wounds made with gunshot, in which learnedlie he doth con-
fute the long receiued error that hath beene maintained for
truth, how that such wounds should be venimous. How plea-
sant this argument is, & also profitable, I refer it to thy iudge-
ment (gentle reader) mistrusting nothing, but when you shall
weigh his arguments, with theirs of the contrarie part, you wil
be wholie of mine opinion. And yet this good Gale staieth
not heere, nor is fatigate and wearied with these great pains,
but hath also finished a golden worke which hee calleth his
Antidotarie, in which is comprehended the treasures of Chi-
rurgerie. There shall the Chirurgion hauing neede
of medicines which doo repell, attract, resolue, mollifie,
suppurate, mundifie, incarnate, conglutinate, cicatrise,
(and what is else requisite to bee vsed in the Arte,)
¶iiii. finde

finde abundance, as well of those which are called simple, as
also of them, which because they stand in the mixture of di-
uerse simples, are named compund. There shall he also with
small paine and great gaine receiue in one houre, that which in
xl. yeres trauaile, with no small expence, this Gale hath inuen-
ted and found out. These bookes are now perfectly finished.
He hath moreouer in his hāds diuerse other works (as I heare)
vnfinished, as a booke entituled, a Compendious Method of
healing tumors against nature, another of the true and perfect
cure of all kinde of vlcers. Also a new translation of Guido
de Cauliaco, with certaine brieve cōmentaries vpon the same.
Besides these ther be other whose titles I do not know. Ther-
fore that these may also come to thy vse, I shall require thee
to shew a gratefull heart, & thankfully receiue that which he
hath with paine finished, & is freely without reward offered.
Being delighted with the arguments of these bookes, I am
diligent to answering the other part of your letter M. Gale:
You required me that since I was so earnest with you for the
publication of your bookes, that I would write somewhat in
the praise and commendation of Chirurgerie. Which thing
in mine opinion is superfluous, when that there can be no
greater praise than is written in your workes, considering that
through the benefit of this arte the wounded is made whole,
the broken bones vnited, the ioynts being out of their natu-
rall seate, reduced into their proper places, the hough & pain-
full tumors expelled, and the virulent & maligne vlcers (which
doth eate and deuour the mēbers of man no lesse than moths
doth clothes, and fire that is put to it) are vanquished & over-
come. Be not these great benefits, & such as needeth not the
commendation of other? But yet if these will not satisfie you,
at the next setting out of other of your labours, if this my
weak bodie may recouer strength, I wil to my power satisfie
your expectation. In the meane time I bid you wel to fare, &
remēber your white haire is messengers to admonish you
that you must leaue this world, and repaire to the heauenlie
Chirurgion Christ. And therefore hast you for the time that
remaineth, & finish those works which you haue in your hāds.
Again farewell, & loue you Cuningham as you haue begun.

THO. GALE CHIRVRGION, VNTO
the friendlie Readers, Salutations in Christ, &c.

IT was not without great skill & knowledge, y^e the wise
learned Grecians did cal man by the name of Microcos-
mos, which is as much to saie with vs, as the lesser world,
for the greater world (in Greeke Cosmos) doth consist of the
heauenlie and elementarie region, and the lesser world (be-
ing man) doth vnder God rule and gouerne whatsoever is
in the same contained, and applieth them to his vse and profit.
And if we shal begin first with that most meruailous hand
worke of God, I meane the beautifull heauens, so wonder-
fullie adozned & decked with most comfortable lights, what
else shal we iudge but that he ruleth them, when being pla-
ced so farre from the distant, doth diligentlie & trul-
& obserue, not onelie their motions, ascensions, descensions,
progressions, retrogradations, stations, deuiations, declinati-
ons, coniunctions, and sundrie configurations, but alloweth
heth what mutations, alterations & effects they haue in the
elementarie region, whereby he is taught to rule & which
may be to his profit and gaine, & eschue, or to mitigate, &
equallie beare, what is thereto contrarie, & hereof it came
to passe, y^e the greate Astologian, Claudius Ptolomæus durst
boldly affirme, that The wise by prudence and good skill,
Shall rule the stars to serue his will.

Yea, & the wise Philosophers and Poets, which did deep-
ly, & with no small iudgement behold the figure & shape of
man, how he onely among all liuing creatures looked up-
ward to the heauens, they did constantly affirme, y^e only for
y^e cause he had giuen to him such countenance, & that right
eloquentlie the Poet setteth out in these few verses.

Pronaque cum spectant animalia cætera quæquæ,

Os homini sublimè dedit, cælumq; videre

Iussit, & erectos ad Sydera tollere vultus.

Where all things that doo breath,

doo on the earth their lookes cast,

¶ V.

God

OTH God when man he did make, 314
gave him so great a grace:

On Sunne, Moone, and eke Starres,

that he his eyes might fast:

Also to view the skie, and that with vpright face,

And heere by the waie I gather, that this countenaunce
was not giuen man onely to gape, gaze, stare, and looke on
the Heauens, but wysely to consider the wonderfull forme
and frame hereof, howe incessantlye it turneth and moueth
about the center of the earth, and that the heauens are as
fresh & lustie at this present to fulfil their course, as at their
first creation, and that he by considering them, might cōfesse
that there is a God, who ruleth them, and hath made them
to his vble and profit: but let that passe, and come we vnto
the Elementarie region. What thing is therein conteined
which he gouerneth not, & taketh of them profit. The winds
he gathereth in a small compasse, & by the force of them, he
runneth and walketh on the rough Seas, as on the land.
The fishes in the greatest depes, he bringeth to his handes:
the fowles of the ayre for all their swiftnesse of winges, he
getteth for his pray. Yea, he subdueth one foule, and teacheth
it to bring diuers others vnto him. Example of the Hauke,
& the partridge, such is the diuine wisdom, & great power
giuen to this little world, man. What? doth he not subdue
the most strong and scarce beastes, & ouer runne those that
are most swift? The Horse being a couragious and proud
beast, for all his strength, swiftnesse, and force in his houlis,
doth he not brydle and tame, & rydeth on him lyke an Em-
perour, & gouernour? The mightie Lion for all his strength,
is made captiue & subiect: the Hart, and Ware, for all theyr
swiftnesse, he ouertaketh, and to conclude, what beast is it
whome man hath not, or cannot bring in subiection? What
say you to the venemous serpents, scorpions, toades, & such
as are poyso to humaine nature, which man doth not onely
banquish: but of them maketh healthful medicines, to expel
greuous infirmities. I omit for breuitie, the innumerable
trees, plants, fruits, herbes, rootes, gums, stones, mettalls, &
earthes, whose secret natures he hath found out, whose ver-
tues,

his commoditie and welth. What artes may he inuene,
what sciences found, & misteries set out: so that of right as I
suppose, I may call man Microcosmos, & the lesser world.
But me thinke I here one demaund, to what ende is this
long tale of man, set out: for sooth, that you may rightly &
duely consider, what a noble & excellent substance man is of,
who is the subiect & matter on which the Physicion & Chi-
rurgion doe worke. But as touching the Physicion, I haue
nothing to say, & therefore of the Chirurgiō I purpose some
what to vtter, both to warn this microcosmos man, of those
who vnder the name of Chirurgions, be nothing else but
open murderers, and also to deface these rude Emperikes, &
to prick forward the right Chirurgion, & that you may the
easier conceiue that which I go about, it behoueth you to
know, y^e chirurgery is most hard & difficult, to attain vnto,
& is also a long art, & requireth long time in learning, & also
exercising, as both y^e princes of phisicke Hippocrates, & Galē
doe testifie, & all wise men doe also confesse: for how can it
be but difficult & long, when y^e chirurgiō must consider so ma-
ny diuers temperatures of men, & hyd and secret effects, and
properties of nature in them grafted. Wherefore doth one
loue porke, an other hateth it as poyson. Some abhor chāse,
some frute, & other some wyne: Wherefore doth one concoct &
digest meat most hard to concoct. An other is not able with-
out long time to digest the easiest & lightest meates: where-
fore is one by drīking of wine made loose bodied, & soluble,
wher an other man cannot haue y^e benefite, no not wth strong
& behemēt lardines? Furthermore, chirurgerie chiefly cōsi-
steth in y^e right vse of profitable experimēts, which require
both lōg time in finding thē out, & also in obtainīg their right
vse: & least you may object y^e one may receiue experimēts of
other y^e are learned, & so easely obtaine the art: I must say y^e
the right vse can not so easely be obtained, for to y^e is requi-
red that both the chirurgiō himself be learned & wise: & fur-
ther, y^e he seeth other chirurgions of long experience worke, &
put those experimēted medicines in other right vse: this ma-
keth y^e art lōger, for y^e ther spring help infirmities, unknown
to

to them before our time: What saie you to *Chirurgerie*? *Quid sit, quid sit, morbus Gallicus?* Who euer haue
written of the nature, cause, and accidents of it: which is the
occasion that so many miserable haue died, and daillie per-
rish of it: and those that haue receiued health, haue bene so
small a number: Againe, the arte is longer to vs English
men than to other, when as we are first constrained to learn
the Latine tongue, before we can attaine the mindes of
those who write of Chirurgerie. There be diuerse other
things which also maketh the art long, which for that I wil
not be tedious, I comit it to thy discretion to consider. Now
this I conclude, if the subiect of Chirurgerie be so noble and
excellent a creature, the arte must also be noble and excel-
lent, which teacheth to worke on it. If the art be excellent,
then it followeth, that it is difficult and harde. Againe, if it
be long, then it requireth a long time in the obtaining ther-
of, if then that the subiect of Chirurgerie be so noble, the
art so excellent and difficult, and so long a time requir'd in
the getting thereof, thou maist easilie iudge that the rable
of these rude Emperikes (and dross of the earth, which when
they cannot otherwise live, chop straight waies into the art
of Chirurgerie) be no Chirurgions, but manquillers, mur-
therers, and robbers of the people: such are some Host-
ers, Tailours, Fletchers, Winstrells, Souters, Horselatches,
Juglers, Witches, Soycerers, Balwdes, and a rable of that
sect, which would by lawes be driuen from so diuine an art,
the exercise of which, for want of knowledge, bringeth some-
time losse of member, sometime of life, and sometime
both of limme and life. Wherefore I doe admonish the
friendlie Reader, whatsoeuer thou art, that hast need of Chi-
rurgerie, not to trust euerie runagate, and him that calleth
himselfe a Chirurgion, but consider whether he be learned
or not, demand of him some questions of his arte (which if
thou canst not doe of thy selfe, thou shalt finde diuerse in
my booke, entituled: The Institution of a Chirurgion) which
if he answereth them, thou maist be the bolder to commit
thy selfe to him, otherwise trust him not, though he saith he
haue cured an hundred of that infirmitie, for Experimen-
tum

tum fallax, experimentes are deceivable. Now seeing by
these few lines, you may coniecture what a diuine & ex-
cellent arte, Chirurgery is, and how thou maist discerne &
know the right Chirurgion from the murdering and bus-
sardly Emperike, I think it good in few wordes, to set out
vnto thee, what caused me to publish these few & simple la-
bours of mine. There were two things which moued & stir-
red mee hereto (loving Reader) the first was the discharge
of my talent toward God, and dutie to my natie country:
the second was to helpe my brethren y^e Chirurgions, who
although they are desirous to attaine their arte, yet bothe
because it is so long, and not set out in our vsuall language,
they are frustrate of their desire, & the common welth vn-
furnished of men of this professio. Wherefore musing long
with my selfe, what part of the art I might best set out, as
most necessarie for the, and most speedely to attaine y^e arte:
I founde none more conuenient then first to write an in-
titution of a Chirurgio, in which he might learne the the-
orike part and principles of the arte: which when as I had
finished and brought to an ende: I did not think good there
to stay, but thought also it a necessary thing to compile iiii.
treatises, comprehending the practise of some parts of the
arte. Wherefore I dyd set pen to paper, and wrote an En-
chiridion of Chirurgerie, containing the methode and way
to cure wounds, both in similer & instrumentall parts, and
eke fractures and luxations, with a new way, of stanching
flux of blood, with out cauterising yrons, by a poulder de-
uised by maister Perpoint, and mee, whan as any member is
taken off from the bodie, & is now in the Hospitals of Lon-
don, vled to the great comfort of the sicke people, & safegard
of their liues, where commonly before they perished & de-
cayde: & while I thought here to haue staied, behold, wars
followed, and controuersie arose, whether the cure of wounds
made with comon gunpowder and shot, were like to inue-
nomed wounds, or else wounds confused, which controuercie
to decide, I thought for the tyme necessarie, and haue com-
piled a little volume, confuting the aduersaries opinions, &
establishing myne owne, & yet further waying what want
the

the Chirurgions had of good and approued medicines be-
longing to their art, I dyd take out of y best authors, such
as might serue herein their necessarie vse, adding thereto
such expert medicines as I had both inuented and proued :
and this booke I haue called my Antidotarie, all which iiii.
bookes, I shall require thee hartely to take in so good part, as
I doe offer with free heart, and loue to profit, both thee and
other. And here I may not forget Maister D. Cuningham,
who was no small helpe to me in diuising the arguments,
and perusing the copies written, whose traualles in this
behalfe, I commend to thy thankfull minde, louing reader,
there now resteth no more, but to commit my workes with
my selfe, vnto thy iudgement : praying thee where the er-
rours haue escaped, both to pardon the same, and also to giue
me warning of them. Thus doing, thou shalt encourage
mee during lyfe, according to my small knowledge, to tra-
uaile in this my vocation. Fare heartely well, louing Rea-
der, at my poore house in London, the xii. daye of Septem-
ber. 1563.



THOMAS GALE CHIRVRGION,

vnto those that desire the knowledge of Chirurgerie, greeting, &c.

TWO things there are (soe to be lamented) which chiefly haue brought the most noble and auncient arte of Chirurgerie to extreme decaye and ruine: one is, that euery person good and bad, learned and vnlearned, Chirurgion or no Chirurgion, doe without penaltie and correction of lawes, freely take on the practise of Chirurgerie. The other thing is, that the Chirurgians them selues (I speake for the greater number) are unworthy professors.

The first we cannot redresse, but lament. The second somewhat we both can and will labour to amend. For the greatest number of Chirurgians (I meane those that are thereunto lawfully called) are so rude and unskillfull in their art, because they haue no methode, no exact way, or yet order in learning the grounds and principles of Chirurgery, either set out of any author whome they are able to vnderstande, or else taught of their maisters and tutors, of whome they should be instructed: so that they are confused in their studies, and make rather a rude chaos, then a perfect arte of Chirurgery.

For now it is come to this point, that if they can get this recepte, and that recepte, as they terme it, they thinke they neede no further studie. So that the more recepts he hath, the greater Chirurgion he thinketh himselfe to be: such ignorance nowe raignes, that receptes beareth the bell. Theorie of Chirurgerie is quite forsaken, or not regarded. For if you shall come to one of these great maisters with their receptes, and aske him what Chirurgerie is, what is the subiect to Chirurgery, what is the ende of Chirurgerie, how many parts doth Chirurgerie consist on: they are constrained to be silent and say mum.

And if anie be impudent (as oft there are) & speake, he
getteth

giueth but a ridiculous answer. And yet we will think a man not meete to be called an artist or workeman, which cannot tell (being required) what his art is which he professeth, although he hath neuer so many instruments and tooles. For the arte consisteth in the right vse of the instruments, and not onely in hauing them. Which vse is gotten first by learning the art, and then by exercising the same.

And to learne the arte, is required a Methode and order, for without it, you shall neuer exactly attaine the same.

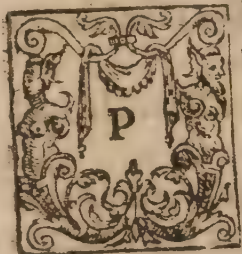
Wherefore we now according to our small power & simple knowledge, waying the promises, and hartely wishing the redresse of the same, haue set out the Theorique part of Chirurgerie in this present volume, containing the principles and sure grounds of the arte, in such order and methode, as shalbe most couenient for the young student. And if I haue not herein performed that which I desired, yet I haue giue occasion to those that are better learned, to set out a more perfect work of this argument. And I thought good to make it Dialogue wise, for that it is most apt to teach & instruct by. For by this meanes all doubts may be both demaunded and also answered fullie. And for because it is the first booke that one must reade which will learne the art, I haue named it The Institution of a Chirurgion, in which he shall see, not onely what his art is, but also what manner of person he must be himselfe, and what conditions are in him required. Furthermore, what instruments he must be garnished with, and how he shall in time and place vse them rightly to the profit of the patient, honour of this art, and his owne worship. Wherefore there resteth no more, but that you take these my labours thankfullie, and reade them diligently. Fare heartelie well, & forget not to spend thy time to the profit of the common weale. At my house in London the 20. daie of Maie.

AN INSTITUTION of a Chirurgion,

containing the sure grounds & principles of Chirurgerie, by
Thomas Gale, &c.

The Interloquutors.
Io. Yates. Tho. Gale. Io. Field. Chirurgions.

John Yates.



Phœbus who chaseth awaie the darke and vncomfortable night, casting his golden beames on my face, would not suffer me to take anie longer sleepe, but said: Awake for shame, and behold the handie worke of our sister Flora, how she hath reuested the earth with most beautifull colours, meruailouslie set in trees, plants, hearbes, & floures: insomuch that the olde and withered coate of Winter is quite done awaie, and put out of remembrance: at which words of Phœbus my hart quickned in me, and all desire of sleepe was eft soones forgotten. Wherefore I am now come into this beautifull medow to recreate my selfe, and gather some of those pleasant hearbes and floures which here doe grow. But let me see, me thinke I perceiue two men walking together, and reasoning also very earnestlie. I will appoach nêrer vnto them, perchance they be of my acquaintance: Surelie I should know them. I am deceiued if the one be not my friend M. Gale, and the other Maister Field. It is so indeede, wherefore I will go & salute them. God that hath brought vs together into this place, make this date prosperous & fortunate vnto you both.

Tho. Gale. Brother Yates, the same we wish vnto you, and you are welcome into our companie.

John Field, This faire and pleasant morning will not

suffer

*This is a poem of this John Yates printed
before the first edition in Hall's Chirurgion*

An Institution

suffer Maister Yates to keepe his bed, but leauing the citie, he roameth the fields, to esple out some straunge hearbes, vnto him yet vnknowen.

John Yates. I must of force confesse, that you doe hit the naile on the head, but since my happe is so fortunate as to meete with you both, and that nowe in this pleasant morning, I would leaue off my former determined purpose, and require you to enter into some talke of Chyrurgerie. For since you both were brought vp vnder maister Ferris, (bee- ing now Sergeant Chirurgion vnto the Quenes Maies- tie) one, at whome both for his knowledge and experience, you did not a little profite, and also that you haue had long practise your selues, you shoulde meruailouslie pleasure me, and profite other, for so may it come to passe, that it might bee in the place of an Institution, vnto those that shal heere after desire the knowledge of Chirurgerie.

Tho. Gale. Your request is honest and reasonable, and therefore not to be denied.

John Field. We were about the like thing when as you saluted vs, wherfore renewing our first talke, we will accom- plish your desire.

John Yates. I haue read many authoꝝ in Chirurgerie, and yet finde small profit by them.

Tho. Gale. What be the names of your authoꝝ?

John Yates. Theodoricus, Brunus, Lanfrancus, Rolandus, Rogerus, Bartilpalia, Guilhelmus, Guido, Brunswicke, and Vigo.

John Field. What part of Hyppocrates, Galen, Auicen, Paulus, Rhafis, Albucasis, and Haliabbas, haue you read: these be of greater authoritie, and of whom you shal learne sound doctrine.

John Yates. With these I haue not ben much acquainted.

Tho. Gale. Well, then the next waie is, that you do put out such questions as you would haue answered, and stand in doubt, and also answered to that which shal be demanded.

John Yates. Right gladlie, for there is no waie by which I shall so much and in so short a time profit.

John Field. Truth it is, wherfore let vs begin without further

Further detracting of time.

Tho. Gale. Then seeing our talke shall wholie be the institution of a Chirurgion, it were meete and conuenient first to vnderstand what Chirurgerie is. Wherefoze answere me I praye you, what call you Chirurgerie?

Iohn Yates. Guydo de Cauliaco (in his booke which he calleth his Collectorie) defineth it in this sort: Chirurgerie is a part of Therapeutike, healing men by incision, vntio, and articulation.

Iohn Field. Those wordes are taken out of a Booke ascribed to Galen, being intituled: Introductio, seu Medicus, but he should not haue called it corruptlie Therapeutike, but Therapeutike. For Therapeuticon is that part of Physicke which cureth: this part consisteth either in curing by conuenient diet, either by medicine, or else by outward vse of the hand. Where Galen, (or hee that was the authoꝝ of the booke aboue saide) affirmeth, how that which healeth by the hand, is a portion of the curatiue part, this helpeth men by incisions, vntions, and reducing the bones in their naturall seate.

Tho. Gale. Yet this is no perfect definition of Chirurgerie, because the definition doth containe in it so much, as to Chyrurgerie is required.

Io. Yates. Then you shall heare another definition out of Guido. He saith, y Chirurgerie is said of this Greeke word Ciros, which signifieth an hand: and Gyos, that is, worke, or operation: as who should saie, Chirurgerie is the science of working by the hand: how like you this definition?

Iohn Field. Worse than the other, both for y it is no definition, but onelie the signification of the name: and also for that Ciros and Gyos, be no Greeke wordes, which shoulde shew that either Guydo was no Grecian, or else that his wordes are corrupted..

Tho. Gale. Truth it is, for Chirurgia is deriued Apò tēs cheiròs cāi tòu érgou, but both the description of Chyrurgerie, and also the Etymologie and signification of the name, doth right well shew what Chyrurgerie is, although it bee no answer to our demaund.

An Institution

John Yates . When I praie you let me learne at your handes what is the true and essentiall definition of Chyrurgerie.

Tho. Gale. Right gladlie. Galen in his booke of medicinall definitions,saith , that Chyrurgerie is the quicke and readie motion of steadfast handes with experience : or an arteficiall action in Physicke,done by the handes,whereby is obtained the desired scope . So that you may by these wordes hetherto alleadged out of the Introduction, and the booke of medicinall definitions, forme a definition on this wise. Chyrurgerie is the art which cureth those infirmities and griefs of mans bodie,which are to be done by right vse, and application of the hand.

John Field. In this definition is to be noted,that Chyrurgerie doth not cure all griefes which require help of y hand, but onelie such as are curable. Also it is to be understode, though in the definition is put no other waies of curing those griefes, but by the right vse of the hand,yet Chyrurgerie hath neede both of that part which cureth by diet,and of that which helpeth by medicine. As is most euident and clere in great inflammations,& also in those bodies in which Cacochimia(that is to saie,ill Iuse)is found,where the humours are defiled and corrupted.

John Yates . When it should seme that Chyrurgerie is so ioyned to the other two parts,y it cannot be wel separated from them, although they be now two distinct artes.

Tho. Gale.Truth it is,and in the beginning Physicke & Chyrurgerie were both one,and one man exercised both,soz so did the Princes of Physick,Hyppocrates and Galen.

John Yates. When I perceiue that Chyrurgerie is not so base as it is taken for,and that it is of great antiquitie, being the most auncient part of Physick,& was exercised of Emperours, Kings.Phylosophers,and Physitions.

John Field. The basenesse of it,and eke small estimation,commeth of the vnlettered and rude Emperikes, who taketh on them the office of a Chyrurgion, when as they know nothing lesse,than what Chyrurgerie meaneth, but as touching the antiquitie of Chyrurgerie,you shall not be

leues

leue vs, but regard the words of Cornelius Celsus (which are written in his seauenth booke) who saith. Hec pars cum sit vetustissima, magis tamen ab illo parente omnis Medicine Hypocrate, quam a prioribus exulta est. This part of Physicke (saith Celsus) being the most auncient, yet it was more increased by Hyppocrates (the father of all Physicke) than of all those that were befoze his time. Here you may perceiue that it is the most auncient and eldest part.

Tho. Gale. The same Celsus also setteth out certaine noble persons, who dailie more and more did augment the art, for it did flourish in Aegypt by reason that Philoxenus did exercise it. Also Gorgias, Sorastus, Hieron, the two Apollonij, and Hammonius of Alexander. At Rome also Tryphon and Euelpistius and Neges, were right excellent in Chyrurgerie, and by their learned workes did cause the art not a little to flourish. Podalirius and Machaon (the sonnes of Aesculapius) being with Agamemnon in the Trojan warres, cured the wounded souldiers, as Homere the Greeke Poet affirmeth.

John Field. All these, as you saie, were right excellent in Chyrurgerie, and famous also, chieflie for curing of wounds and vlcers. In like sort was Chiron, Centaurus, and Achilles, with diuerse other.

John Yates. Seeing that I haue learned that Chyrurgerie is the third part Therapeutike, what Chyrurgerie also is, of the antiquitie and authoritie of the same: I woulde gladlie vnderstand of how many partes it doth consist and stand on.

Tho. Gale. It hath two partes, the one called Theorike, conteining the speculation and knowledge, the other Practike, which is the manuall operation and exercise. The Theorike parte is obtained by demonstration and exact knowledge of the principles of the art, and this both doth inuent, and teach what is to be done, which waie, and also by what meanes. This parte a man may perfectlie knowe, although he neuer doeth exercise anie portion of the Practise: the Practike part is found out and inuented by reason and experience, and it doth rightlie and readilie exercise the same

things that the Theorike hath inuented. This part no man can exactly obtaine, except that both he doth see other which are skillfull in the art to worke, and also diligentlie exerciseth it himselfe, euer bearing firmelie in minde both what he hath seene of other men brought to good end, and what he hath also done himselfe.

John Yates, Then seeing that you haue offered vnto me how many parts of Chirurgerie there are, I praise you first begin with the Theorike part of it, and let me vnderstand exactly what it is, and that being finished, proceede to the practise.

John Field. To set out the Theorike, it will be profitable, but as touching the practise, it were both superfluous and vaine, seeing that the perfect curation of Apostumes and tumours, are set out in the booke of tumours against Pusture. Also the true and exact cure of vlcers, is at large opened in another worke, whose Title is, A perfect and exact methode of curing vlcers. Furthermore, the practise of healing woundes both in similar and instrumentall parts. Also of fractures and luxations, you shall finde in his Enchiridion of Chirurgerie. And as touching wounds made with the common Gun powder and Pellet, you shall receiue the true and methodicall cure, in a Treatise bearing name, Of curing woundes made with Gunne shot, in which Treatise is set out, and also manifestlie confuted the grosse and fond errors, not onelie of John Vigo, Alfonse Ferris, and Hier. Brunwicke, (which make the shotte venimous, and consequentlie the wounde therewith made, and so the cure to bee lyke as is in venimous woundes :) but also by demonstration hee ouerthroweth all those that bee of that opinion. So that for the practise parte, I do not see what is more to bee desired, except it were some Treatise, in which might bee comprehended the art of Phlebotomie or letting of bloud, and also of scarification and boring, which I hope (God granting him lyfe) hee will hereafter set out.

John Yates. These be a number of wortheie booke, which doe containe the practise of so wortheie an arte. God graunt you

you long life Maister Gale, to accomplish that you haue yet behinde.

Thomas Gale. Although some perchaunce more busie than learned, and yet more learned than discrète and modest, and yet perhappes more discrète and modest, than a fauourer of those that trauaileth for the profite and vtilitie of other, haue not a little lifted vp the groine, and bent the bowe, and with manifest wordes of contumelie rewarded me: yet the loue of my Countrie, and desire to profite those of my profession, shall ever be a sufficient spurre to prouoke me to continue as I haue begun, for true it is that the Poet Pertius writeth.

Fœlix à tergo quem nulla Ciconia pinxit.

Which may right well be englished, although not verbatim, yet in meaning on this or like sort.

O happie man that such hap hast,

thy path to tread so right:

That no serpentine tongue will carpe,

Or long-bild Storke eke spight.

But retourne wee to that from whence we are somewhat digressed, our talke and communication at this present, shall not further extend, than to institute the Chirurgion in the Theorike part of his arte. Wherefore since you haue learned what Chirurgerie is, with diuerse other apt and needfull thinges: it dooth behoue you to knowe the subiect of Chirurgerie. For all Artistes and workemen haue their subiectes and matter on which they doe exercise their arte. So the Mason hath Stones and Bricks, which according to his arte hee helweth, squareth, cutteth, and proportioneth. In lyke sorte dooth the Carpenter with Woode and Timber, and the Smith with Iron. All which be accounted subiectes to these artes. And if the Mason, Carpenter, and Smith be so curious and diligent in knowing, chosling, and considering of Stones, Timber, and Iron, which be thinges of no great valure or estimation, howe much more then behoueth it the Chyrurgion to knowe what the subiect is on which hee must exercise his arte.

John Yates. You haue rightlie saide, and by these your wordes I gather, that the subiect to the arte of Chyrurgerie, is that which is to Physicke: I meane mannes bodie being apt as well to sicknesse and infirmities, as also to health.

John Field. You haue rightlie answered, but this is not sufficient to answer that mans bodie is that stone, timber, yron, and matter, whereon the Chyrurgion must exercise his arte: except you also doe knowe the partes of mans bodie, their scituation, nature, and office, as of bones, cartilagies, ligamentes, nerues, veines, arteries, muscles, flesh, and skinne. For I thinke no man so rude, but doeth consider, that without the perfect knowledge of these, howe easilie he shall fall into intollerable errorrs, especiallie in phlebotomie, in fractures, and luxations, and whereas occasion is offered, to make incision.

John Yates. The more I heare you two speake of Chyrurgerie, the farther me thinke, I finde my selfe from the knowledge thereof. And so much the rather, that by your wordes I gather, how that the subiect and matter of Chyrurgerie (being the bodie of man,) cannot be fullie knowne without the exercise of the Anatomie. Wherefore I cannot a little meruaile at some, who being Chyrurgions in name, doe not onelie neglect this knowledge of Anatomie, but also enuieth those that doe therein trauaile.

Tho. Gale. Well, let such go with their wilfull blindnesse and obstinate ignorance, and let vs now consider what the end of Chyrurgerie is.

John Field. I suppose that maister Yates knoweth that the end or intention of Chyrurgerie, is to heale all such curable infirmities, as are to be cured by the office and due administration of the hand.

John Yates. I render to you both, heartie thanks, for that by your talke I haue learned what Chyrurgerie is, the antiquitie of it, and noble authoers y^e did professe it, of how manie parts it doth consist on, also what is the subiect or matter on which the Chyrurgion doth exercise his art, and what is the end or finall intention of Chyrurgerie: nowe I will further

further desire you to shewe me the way to procede in learning and obtaining this noble and famous arte,

Thomas Gale. Befoze we set out the waye how to attaine y^e knowledge of Chirurgerie, it is cōuenient to show what manner of man a Chirurgion should be whome we should instruct in this arte. For manifest it is, that all men are not to be admitted vnto this mysterie.

Iohn Field. Truth it is, for according to the prouerbe. The diuel made a souter a shipmā, signifying here by, that nature repugning, all thing is in vaine. How vnapt & vnfit thinke you, is a swine to be taught to hunt: surely as vnapt, as a hound is apt & fit: but in the admission of one to learne our art, is to be noted the giftes of nature, & also education from his infancie. For if men exercising artes of lesse estimation and pryce, doe with diligent care chose such as are fit for their facultie and arte: how much moze ought the Chirurgion so to doe?

Tho. Gale. It is surely so, and the giftes of nature required in him that should be a Chirurgion, Cornelius Celsus doth name to be these. He must be a young man, hauing a sure and stedfast hand, voyde of trembling, & that he hath the vse of the left hand, as well as of the right, a sharpe and quick sight, one voyde of all feare, without foolish pittie: so that he be not moued any thing by the clamor and noyle of the patient, but minding to cure him, whome he taketh in hand, he shall neither hast more then is meete, or yet make lesse incision then is requisite. Hippocrates in a booke intituled Lex Hippocrates, speaketh of him that shall learne Physicke, in this sort. Quisquis enim medicam scientiam verè sibi comparare volit, hys Ducibus voti sui compos fiet. Natura, Eruditione, Loco studijs apto, Institutione à pueritia, Industria & tempore. Primò nanquè omnium, natura est opus.

Hac etenim repugnante vrita fiunt omnia, at si ad optima viam natura demonstret, artis eruditio facile eueniet: quā quidem prudentia sibi comparet oportet, ita vt ab ipsa pueritia institutio accedat, atque hoc in loco disciplinis quidem conuenienti. Preterea operam sedulò nauare oportet: eamquè ad longum certè tempus, quo ipsa iam insita disciplina, foeliciter

An Institution

fatis, & cum profectu fructus suos ferat. Who so euer (saith Hippocrates) will learne the arte of Physicke, following these guides, he shall haue his desire. Nature, learning, an apt place for studie, good bringing vp from the childhood, diligence, and time. For first of all nature is to be looked for. For nature repugning, all thinges are frustrate. But if that nature be inclined vnto the best thinges, the knowledge of the art will easelye followe, which it becometh to get through prudence, so that frō the childhood he be well trained vp, & that in a place apt for studie. Furthermore he must bestow great diligence, & that for a long time, so that learning (being now grafted in him) may happely, & that with increase, bring forth hir fruites. And Hippocrates resembleth the studie of Physicke vnto agriculture or tillage. For (saith he) what consideration is of those thinges which the earth bringeth out, the lyke in all points is of y^e knowledge of Physicke. For our nature is as it were y^e fielde, the disciplines of teachers, are like the seedes: also the institution and bringing vp from the childhood, is resembled to the casting of seede into the ground in dew & conuenient time, the place in which he must learne, is as it were the ayre, giuing nourishment to such thinges, as spring out of y^e ground. The industrie and diligence bestowed in the arte, is lyke the tillage of the plowman, & last of all, time doth strengthen these, & suffereth them perfectly to be nourished. And of this time speaketh also the poet.

Assiduo illis durum cauat Vndula Saxum.

The watry droppes, so moyst and soft

Doth pearle hard stones with falling oft.

John Yates. If this should be obserued among phisitions, I do not doubt but ther should be more famous men among vs, and fewer rude & ballardly empirickes: but this toucheth nothing the Chirurgion.

John Field. As much as the Phisition, for doe you not remember, that Hippocrates comprehended Chirurgerie vnder Physicke, being one portion of the curative part?

Tho.

Tho. Gale. Also as touching education, Hippocrates in his booke called De Medico, would haue a Chirurgion follow the warres. For he speaking of the other parts of Physicke saith. Next is the Chirurgerie of wounds receined in the warres, and extraction of darts and thinges in them fixed. For seldome ciuil and intestine diuisions chaunce in all times, yet in externe and outward warres, these chaunce most commonly. Wherefore he that will vse this Chirurgerie, it behoueth him to frequent the warres, & follow outward armies, and hostes of men. For so shal he be exercised for that necessitie and vse.

John Field. In deede so dyd Podalirius, Machaon, and Achilles, with other more, of whome mention is made.

John Yates. Yea, but many Chirurgions will not occupie them selues in learning those parts of which they haue dayly exercise. Much lesse then couet to follow the warres, they haue not such a burning zeale vnto their arte.

Tho. Gale. The more pittie, not for their cause, but for the common weales.

John Yates. If all these points are required in him that should be a Chirurgion (as I must confesse they are) how happeneth it, that there are an infinite number of Chirurgions in name, which haue scarce one of these forenamed giftes. And if they haue any, it is boldnesse, for that wanteth not in them, they are as bould, as blinde bayard.

John Field. Yea, but where Celsus praiseth bouldnesse in a Chirurgiō, he meaneth the vertue called fortitude, which wher as necessitie doth require, is not moued with feares, countenance, & clamour either of the patient, or of the standers by, but minding the health of the sick, according to art, maketh incision, and doth such lyke things.

Tho. Gale. And to aunswere you, why there are such a sort of rude emperickes, yea, Hostlers, Tailours, Fletchers, Minstrales, Souters, Jugelers, witches, bandes, & to conclude, (an infinit number which heretofore were prohibited the exercise of this arte) suche as otherwise cannot get any liuing: is for that Chirurgerie is now, as it was in the time of Hyppocrates.

An Institution

Who saith, y other arts are not exercised without lawes & penalties, but Chirurgerie is free for all persons, y more is y pittie, whē as so much hurt & damage do dayly spring, thorough y abuse of so noble an arte, so y I am more then halfe perswaded, that Chirurgerie wil hardly, or neuer, gather strength again, & flourish: except the prince hauing compassiō of poore deplozated Chirurgerie, doeth by vertue of lawes driue away from hir, these here fozenamed enemies.

John Yates. But yet I doe meruaile at those which are as it were Chirurgions by profession, knowing themselves boyde of a number of the poynts required in a Chirurgiō, that for loue to their countrey, and cōscience sake, they wil not yet at the least chuse such seruants, as had some of the fozenamed vertues. Which if they dyd, there wer yet some hope that Chirurgerie should hēreafter flourish.

John Field. Their aunf were is, that when the sky fall we shall haue Larkes. They thinke that they should not haue seruants to serue in that vocation. For few (say they) that haue well brought vp their sonne, will put him to the arte, bicause it is accounted so beggerly and vile. Where as in dede, if for a season they would take y more paines themselves, & admit none, but such as should be somewhat meet, there would be a number glad to studie the arte, bicause it would come to estimation, and be a worshipfull liuing to the professor. But shall I shew you what I thinke is the chiefe cause, science hath no greater enemy, than ignorance, & also the prouerbe is true, like will alway to the like, and hereof commeth it, that such carpenter such chippes, such maister such man.

John Yates. Yet me thinketh y one may be a good Chirurgion, though he haue not all the points reconed of Hippocrates and Celsus. As one might think himself right happy, though he neuer did attaine to Aristoteles summum bonum, or Plato his Idæa.

Tho. Gale. It is one thing to say a good Chirurgion, and an other to say an excellent Chirurgion. But let that passe, I would we had good Chirurgions. And bicause the descriptions of Hippocrates and Celsus touching what manner
of man

of man a Chyrurgion should be) seemeth somewhat to strait to you : I will shew you what conditions Guido requireth in him. Not for that I doe preferre the authoritie of Guido before such fathers and parents of Chyrurgerie, as both Hyppocrates and Celsus were, but because perhaps Crassus crassius conueniunt magis. Guido requireth foure things in him that is or should be a Chyrurgion. First, that he should be lettered : secondlie, that he should be expert: thirdlie, that he be ingenious, and last, that he be vertuous, & well mannered. These words you shall finde in his Collectorie.

John Field. And as touching these foure pointes, note first, wher Guido saith he must be lettered, he doth meane, he should be learned, & that chieflie in such doctrine as is in his art requisite. That is, at the least he can write, reade, and vnderstand the minde of the Latine author. If he had knowledge in Geometrie for making his incision, for curing fractures and luxations, and also in curing malignant vlcers, knowing what figure would most speedelie vnite & ioyne the lips of the vlcer, it were verie commendable. Naturall Philosophy is a goodlie oznature to the Chyrurgion, for it sheweth him what resulteth when as there is diuerse and sundrie simples mixed together : but I will go to the second point : he must be expert, that is, he must be garnished with much and long experience, which is excogitated by firme & certaine reasons, and by them also confirmed, otherwise hee is to be accounted rude, & an Emperlike, if he hath not reasonnured and ioyned to his experience. Thirdlie, saith Guido, he must be ingenious, vnto which there are fve thinges principallie required. First, is the readie and good conceiuing, then a firme and sure memorie, next a sound & right iudgement, after an easie calling thinges to minde which he haue heard or scene, and last, a liuelie and sharpe readinesse in finding and inuenting remedies. The manners which Guido would haue in a Chyrurgion, are reckoned of Hyppocrates and Celsus, which briezfelie I will number : they must be bolde and without feare in such cures as are without perill, and whereas necessitie requireth. Also in cures that be doubtfull, not to be rash & hastie, to be gentle
and

An Institution

and curteous, toward the sick patient, to be friendly and loving, toward those of his professiō. Also, wise and circūsped in Prognostications. Last of all, he must be chaste & temperate of bodie, mercifull toward the poore, and not to greedie of money, and this is sufficient touching the description of him, that must be admitted in Chirurgerie. Now let vs talke of the instruments wherewith a Chirurgion ought to be garnished.

John Yates. That is wel saide, and of those instrumēt's I would gladly haue vnderstanding.

Thomas Gale. And so you shall, and for the surer and sounder doctrine, you must note that instruments are saide two maner of wayes, for either they are medicinall, or else instrumēt's of metal: as Iron, Leade, Tinne, Copper, Silver, and Gold. The medicinall instruments are medicines, as potiōs, emplasters, cataplasmes, cerotes, vnguēt's, oyles, balmes, trochise, waters, and such other. But principally as touching vnguents, y^e Chirurgion (after Guydo his minde) ought alwayes to haue in redinesse fīue sundry vnguents, answering to fīue intentions curatiue of Chirurgerie, y^e is to saye, for to suppurate and maturate, he must haue Basilicon, to mundifie and clense, Apostolicon, to incarnate and cause flesh to grow: he shall prepare vnguentum Aureum, to conglutinate with, he shall vse vnguentum Album. And where as any accident chance, as dolour & paine, he shall occupie vnguentum Dialtheum. But I shall not neede to make any longer processe of medicinall instruments, when as I haue (as I suppose) abundantly shewed in my Antidotarie, not onely all the principall intentions curatiue, required in Chirurgerie, but also haue set out medicinall instruments, both simple and compound, required in this art, as also their compositions, vse, and vertues. There are also set out, proper medicines, dicated and apted to the seuerall parts of mans bodie, as head, breast, stomacke, lungs, liuer, spleene, kydnes, bladder, and such lyke, as is proued of Galen in his worke intituled Secundum locos. Although many be of the contrary opinion. And among the rest, I will shew you a notable historie, I thinke to many knowen, as well

Phil.

Whistons and Chirurgions, as other worshipful & honest. It fortuned y^e in London. 1562. that there was a fray made, and the one was thrust through the brest vnder the pappe, and out vnder the left shoulder blade, so that of force the longs were perled through. There were diuers Whistons called vnto the wounded patient, & they all affirmed constantly, death to follow. I also being called vnto the same patient, did also affirme, that death would follow, except he receiued a certaine potion, of which I had experience in the like case in the warres, in England, Fraunce, Scotland, and other places: and he in deede receiued it, and so the longes were preserued from putrifaction, & the congeled blood was expelled out, the wound clenched, and finally, by the arte of Chirurgerie he was restozed to his perfect helth.

John Yates. That man doe I right wel know, his name is Henrie Smith, a water man, he was hurt at Queene hiue, and he is yet liuing, and in good health.

John Field. Wel then, let vs speake of metalline instruments, of which some of them are general: so called, for that they doe generally serue in all wounds and vlcers: & there are particuler instrumētts, seruing to seueral vses, or parts of the bodie. Yet haue I hard that diuers affirme, how that in wounds generally, there needeth no other instruments, then an incision knife, to dilate and enlarge the wound, & so with the fingers to take out the things fixed, whether it be pellet, splente, arrowe head, or what else so euer it be: but the errors of these are so grosse, as requireth no aunswere, seeing that through such kindes of incisions, it happeneth the great veines and arteries to be cut, & so great flux of blood to follow, (beside the dolour and paine which followeth, & many times losse and mutilation of the membre) as is in no case tollerable.

Thomas Gale. Truth it is, but touching generall instruments, those which are in most vse, and ought to be had in redinesse of the Chirurgion, are these: incision sheares, an incision knife, a flewme, a lance, and all this serue to cut and enlarge a wound.

A cauterizin y^eō to cauterize w^{ch}, & stanch flux of blood, a paire

An Institution

of pincers or nippers, to take of plaisters, splegants, and things fixed in the wound, a probe to serch the wound with, a crooked hooke, a neede and a quill to sow and stich with.

John Yates. And what be the instruments which are called proper?

John Field. Proper instruments are these: a Trappan, serving to the head, when as the scull or cranium is fractured, speculum oris, and speculum matricis, also gossipium, serving for lurations and fractured bones, a Siringie masculine, and also femine setons for the necke, Aleuatorie and long needles of wode, to draw thzough the wound: also gossebilles, Crowesbilles, and diuers other described and set out of Albucasis, Celsus, Tagalius, and others.

Tho. Gale. These instruments be of meruailous vse, & without which the Chirurgion can neither perfectly, nor without great grieve and perill, doe that is required: and among the rest, in my iudgement, the Trappen is most necessarie, and of an excellent inuention in burtes of the head. For without it where cranium is fractured, bruised, or else any of the inward pannicles depressed, you shall little preuaile. I my selfe haue vled it with greate profite diuerse times, and especiallie once in Cambridge shere, which I would declare vnto you, but that I shoulde bee somewhat tedious.

John Field. Nothing lesse, but rather pleasant, for by vttering of things done great profit may insue, & we haue decreed to spend this date in the talke of Chyrurgerie, wherefore we desire you declare that historie, and we will giue diligent eare.

Tho. Gale. Right gladlie. Anno. 1559. a seruant of one M. Wroths riding to the fields, and leading a young horse in a halter, tied fast about the arme of the seruant, the horse being wilde and not broken, starting aside, vnhoised the man, and drew him by the arme about a great field, so long, that what with striking, what with drawing, haling, and pulling, being wearied, he stode still vntill companie came and vnloosed the halter, and tooke vp the man halfe dead, and conueyed him vnto his masters house. Chyrurgions were sent

sent for, who finding the seruant speechlesse, and without remembrance of anie one whom he saue, they not perceiuing the cause heereof themselues, neither yet could be shewed of the patient the place affected, departed and left him vncurable. M. Wroth sent for me, and I seeing him speechlesse and without remembrance, coniectured the hinder parte of the head to be hurt, and smitten of the horse, which I was more certaine off, when feeling that part, I found it soft. Wherefore I taking off the haire, did first make incision, and after that set a Trappan on his head, and boyled Cranium through, and tooke out the peece of bone, which done, there issued out much blood, blacke in colour, and drawing to putrefaction out of the confused and broken veines, the next daie following the seruant spake, and came againe to his perfect remembrance, and I vsing things in this cure as art required, God restored the man in my handes to his perfect health. I coulde also shewe you other examples, where the like chaunces haue happened, and the Chyrurgions eyther not knowing, or wilfullie neglecting this profitable instrument, haue brought the patients to their last end. So happened it to a seruant of Maister Pagets in Philpot lane, 1538. and diuerse other, whom for breuitie I do let passe.

John Yates. This was a woorthie cure, and this is a noble instrument, but the Chyrurgions which neglect the vse of this or the like instruments, are of the opinion of that the rude Emperike Smith was, who in a foolish booke of him published, did inueigh against Chyrurgions which trappaned the head in anie grieve of the same, and seemeth to himselfe as it were another Thessalus to ouerthrow the famous authours and inuenters of this instrument, when (in the iudgement of the learned) he was no more to them comparable, then the light of a sparke of fire is equall to the most radiant and shining beames of beautifull Phoebus.

John Field. This now spoken of instruments, (which a Chyrurgion must haue in readinesse) shall suffice, now let vs shew the methode and waie how the person being fit to be admitted to Chirurgerie, may learne the art, least that confusedlie he learne that first which should be last, and so

An Institution

set the cart before the horse, to his no small hinderance.

Tho. Gale. And for this there is to be followed and obserued two precepts: first, that we proceede from things common vnto those which are perticular, or from thinges vniuersall, vnto more perticular. As first to know an inflammation, then how many kinds of inflammations there are. The second precept is, that we begin at things knownen, and so proceede vnto those which are lesse knownen, as first in the curation of wounds, we must beginne with a simple wound, which done, we shall proceede to the curation of compound wounds. So in like manner in vlcers, first to know & cure a simple vlcer, and then to take in hand compound vlcers, beginning with those that are lesse compound, & haue smallest accidents, and so to proceede vnto those y are more compound, & haue most & greatest accidents ioyned with the: the like is also to be obserued in other arts & sciences, as in iudging of coulours, first to know white & blacke, then other coulours, which are not so manifest, according as they come & spring of y mixture of these two, now knowing & considering these ii. precepts, it is necessarie for y right vse of his instruments medicinal & metalline, to consider two things, y is to say, things called according to nature, & thigs against nature.

John Yates. I praise you what are those which are called according to nature: and how many be they in number?

Io. Fi. Guido numbzeth those things which are called according to nature, to be fire, y is to saie, helth, y cause of health, y effect of health, strength, custome, & cōpletion. And health is defined to be an effect according to nature, apt to perform the actions of the same. John Yates. And what doe these fire things according to nature teach and shew me?

Tho. Gale. Because the Chirurgion is natures friend, & minister, these shew you that you must conserue and keepe them by their like, and also to expell their contraries, which would destroy and ouerthrow them.

Io. Yates. And wherof do these fire things spring, & by what things shal I conserue them: for although you say vnto me, y they are conserued & kept by their like, yet is it not sufficient to my vnderstanding, except you shew me what they are.

John

John Field. I will tel you these vi. things, which are secundum naturam, spring of seven naturall things, entering the composition of mans bodie, that is to say, foure elemēts, fire, aire, water, earth: completions, as hot, cold, moist, and drie, foure humors, bloud, choler, fleame, & melancholie, members of mans bodie: vertues animall, vitall, & natural, with their operations & spirits, of these seven natural, springeth health, & y other rehearsed, which are according to nature. The conseruatiō of health doth consist in y right vse of vi. things, named in latine, res nō naturales, like as in y abuse of the, the decay of health & breeding of sicknesse and infirmities followeth.

Tho. Gale. It is right so, & these sixe are called, aire, meat, and drinke, motion & quiet, sleepe & watching, repletion, and inanition, and the perturbations or affections of the minde.

John Yates. I trust I am sufficientlie taught how to vse my instruments, according to the indication taken of y things which are according to nature: now I pray you let me vnderstand what those things are which are against nature, how many they are in number, and what indication is to be taken of them, for the further vse of my instruments.

John Field. Those which are against nature, are so called, because they are contrarie to the same, and doe further destroy and overcome nature, & are vtter enemies to health, and these are three in number, sicknesse, y cause of sicknes, and the accident. The cause of sicknesse, is that effect contrarie to nature, which goeth afoze the sicknesse, & prouoketh the same, and there are accounted of Galen, and the Grecians (whō I follow) two causes of sicknesse, y one being outward, called Procatarectike, or cause primitive: the other is within vs, & is named the cause antecedent or precedent, or cause interne. Sicknesse also is defined of Galen, to be an affect against nature, of which y action of nature is first hurt, & vitiated. And the same Galen doth also make three kindes of sicknesse generallie, according to the parts of mans bodie, in which they are as in y similar parts, sicknes is called intemperature, which is either hot, cold, moist, or drie, or else hot & moist, hot & drie, colde and moist, colde and drie, and if it be in the instrumentall partes, the sicknesse is named ill

An Institution

constitution or conformation, but if sicknesse happen both to similar and instrumentall partes, then it hath to name, solution or diuision of continuitie. Also the accident is one effect against nature in lyke sort as the cause of sicknesse and sicknes it selfe is, but it differeth frō thē in this, y^e lyke as y^e cause goeth before sicknesse and prouoketh it, so doth the accident followe sicknesse, like as the shadow doth the man. Now this word Accident, is taken generallie, of which wee will nothing speake, and it is vnderstode more straightlie or properlie, so is Accident thre waies diuided, for either the action is hurt and quite abolished, as blindnesse in the eye, or else diminished, as dimnesse of sight, or else the actions is corrupted, as the sight depaured, and for the indication which is taken of these thre things against nature: note these two great, (and of all men allowed) conclusions. Contraria sunt contrariorum remedia. Also similia conseruantur similibus. Like as things which are according to nature, are conserued and kept by their like: so also thinges contrarie are remedies for their contraries, & therefore these thre things against nature sheweth you that they are to be expelled and put awaie by their contraries: as for example, solution of continuitie being sicknesse both of similar and instrumentall parts, sheweth that he must be put awaie by his contrarie, that is, vnition and ioyning againe. Also heate is put awaie by coldnesse: coldnesse by heate: drynesse by moistnesse: and moistnesse by drynesse: & so in like sorte in other sickneses, the indication is taken of the contrarietie, do you now vnderstand this?

John Yates. Right well, so that now I doe perceiue that the right vse of my instruments medicinall and metalline, is taking of things according to nature, which sheweth the conseruation by like and agreeable medicines, and of things against nature, which teacheth me to applie things contrarie, whereby I may take awaie all that which is agaynst nature, but if you will be so good as to set out (though it be in brieue wordes compendiously) those things against nature, which falleth vnder the handes of the Chirurgion, as you haue made plaine to me those thinges which are according

ding to nature, I should thinke my selfe so much bound, as hardlie I shall be able to recompence, for although I know that things contrarie to nature, are to be remoued by their contraries, yet if I haue not the exact knowledge what those things are, I shall verie hardlie be able to applie and vse their contraries.

Thomas Gale. It is surelie so, for how much wide you are in knowledge of the sicknesse, so farre wide shall you also be in finding out apt and conuenient remedies, & those perticular griefes or affects against nature, which are subiect to Chirurgerie (as Galen witnesseth in y^e 14. booke. 13. Chapter of his Therapeutike methode) are for the most part reduced to five titles or chapters, y^e is to wit, tumours against nature, wounds, vlcers, fractures, & luxations, there be other things besides these, which require y^e vse of y^e hand, but these rehearsed perfectly knowen, y^e other wil be easie to attain to.

John Yates. When I p^raise you begin first with tumours, and those being finished, proceede to the rest.

John Field. First it becometh you to knowe that this worde Tumour (called in Greeke Onchos) is not y^e which Auicen and the Arabia. name Apostema, and the Latinites call Abscessus. For Tumour is a generall name to all Apostumes and Tumours, whereas this worde Apostume stretcheth no further but onelie whereas Phlegmon is turned into matter, and thre other Tumours called Atheroma, Steatoma, and Meliceris, so that this word Apostume is not so large and generall a name as Tumour is: and therefore abused of Guydo and other, where they call all Tumours against nature, by y^e name of Apostumes.

John Yates. Why sir, be not all tumours against nature?

Tho. Gale. No forsooth, for then it had bene for him superfluous to haue added these wordes against nature. And Galen in his booke. De tumoribus præter naturam, maketh thre kindes of Tumours. One that is Secundum naturam, according to Nature: as the branes, muscles, and other eminences of mans bodie. The second is called aboue nature: when as these fore-named parts are increased more than their naturall forme & figure, but yet in such sort, y^e the

parts can do their offices. The last kinde of tumor is called Tumor against nature, because they hurt the action of the part where it infesteth.

John Yates. I doe now call to remembrance M. Doctor Cuningham, who made also the same division of tumours, 1563. when he read the booke of Galen, of tumors against nature, to the Chirurgions of London in the hall, but I praye you let me learne what a tumor against nature is?

Tho. Gale. Out of the same booke of Galen you may gather this definition. A tumor against nature, is an augmentation or swelling, exceeding the naturall figure of y^e same, and hurteth the action of the same. But Auicen saith, that an Apostume (so called he a tumor) is a sicknesse compound of three kind of infirmities, y^e is to saie, of intemperatures, of ill constitution, & solutiō of continuities: these words you shall finde in the first booke of his Canon.

John Yates. How many kinde of tumors are there?

John Field. Guido and other writers of his time, make three kindes of tumors: Apostema, Pustula, and Exitura. Apostema he calleth a great tumor, in which y^e matter (where of it springeth) doth offend rather in quantitie than qualitie. Pustula he doth make a lesser tumor, in which the matter doth hurt by qualitie rather than quantitie. And this tumor the Arabians call Bothor. The third, which Guido nameth Exitura, is that which the Grecians doe properlie call Apostema, and the Latins Abscessus.

Tho. Gale. But the Grecians do make differences of tumors, according to the substance whereof they do spring. So shall there be but two kindes of tumors generallie, that is to saie, Humoralis, springing of humors, and Flatuosus coming of windie spirites: this Guido termeth Apostema ventosum.

John Yates. And how many differences is there of tumors which doe spring of humors?

Tho. Gale. Two, simple, and compound.

John Yates. How many simple be there?

John Field. There be also two, hot and colde.

John Yates. Why are these tumors called simple and come

compound :

Tho. Gale. They are called simple, when as they spring of one sincere humour, without the mixture of other. And they are called compound, when the tumour commeth of two or more humours.

John Yates. Wherefore are the tumours called hot or colde ?

Thomas Gale. They are called hot, because they spring of hot humours, and named colde by the like reason, because they are engendered of colde humours.

John Yates. How many hot tumours be there, and how many colde ?

John Field. Diuerse and sundrie, as you shall perceiue by the proceſſe of our talke, but the most famous are foure, springing of the foure humours simple, without the mixture of other of these two, &c.

John Yates. Which be they ?

John Field. One commeth of blood, and is called Phlegmon, in English, Inflammation : an other springeth of cholar, and is called Erysipelas, or S. Anthonies fire : and these be hot tumours. Another commeth of fleame, and is named Oedema : the fourth is engendered of melancholie, and hath to name Scirrhus. These two tumours are cold, all other simple tumours, are aptlie reduced to these foure.

John Yates. And what be the compound tumours ?

Tho. Gale. They be diuerse, and varieth their names according to the mixture of humours, & the humour is mixed equallie, or inequallie, if they be mixed equallie, then the tumour is called Phlegmon & Erysipelas, but if they be inequallie mixed, then the tumour taketh name of the humour which surmounteth, as blood surmounting choler in a tumour : it is called Phlegmon Erysipelatodes, if fleame be mixed with blood in stead of cholar, in forme as is aforesaid, then the tumour is named Phlegmon Oedematodes, and if blood mixed with melancholie surmount, it is called Phlegmon Scirrhus. So in lyke case there are three Tumours, which take names of the humours mixed with Choler, Choler hauing the dominion, as when
B.iii. blood

An Institution

bloud is with cholar, they call the tumor Erysipelas Phlegmonosum. If fleame, Erysipelas Oedematosum, and if melancholike, then y tumor hath to name Erysipelas scirrhosum, in like maner, fleme hauing dominion in the moisture with anie of the other three humors, the tumor is first called Oedema, & then if choler be mixed with it, they adde this word Erisipelatosum: if bloud, the tumor is called Oedema Phlegmonosum, & if melancholie, the is it named Oedema scirrhosum. And to conclude, the like is to be said of melancholy, where as anie of the other three are mixed with, as Scirrhos Plegmonosus, Scirrhus Erysipelatosus, and Scirrhus Oedematosus: bloud, choler, or fleame, being vnequallie mixed with melancholy.

John Yates. What profit ensueth to the Chirurgion by knowing the mixture of these humors, in tumors against nature?

John Field. Great profite, for by knowing the true mixture, he is taught thereafter accordingly to varie his medicines, for like as a simple tumor hath a simple cure, & is cured by his contrarie, so a compound tumor hath a compound cure, & is cured by his contrarie: as for the more plainer vnderstanding, if the tumor be mixed of fleame and melancholie equally, then shal you equallie mixe such medicines together, as are conuenientlie vsed in Oedema & Scirrhus, but if fleme & melancholie be ineaslie mixed, and the greater portion is fleme, then in the composition you must in like maner put the greater portion of such medicines as you see in Oedema, & the lesser of such as are applied in Scirrhus, & this rule & precept is to be diligentlie obserued in all compound sicknesse, and for because the mixture of these tumors is so necessarie for a Chirurgion, as you may right wel perceiue by that which is now spoken: behold this table which sheweth you all the mixture & names of tumors against nature, which for the great profite would be committed to memorie of him that will haue the methode of curing compound tumors against nature.

John Yates. You promised to shew the tumors which are referred to the foure principall simple tumors, Phlegmon, Erysipelas, Oedema, and Scirrhus,

John

John Field. And that we promised, we will performe, first uttering their names: and that being done, we will show you their definitions. And we will begin with sanguine tumors, which are referred to Phlegmone, and then procede to the rest. There are referred to Phlegmone, Phygethlon, Bubo, Phyma, Dothienes, Anthrax, Gargareon, Paristhmia, Aneurisma, Gangrena, and Sphacelus.

John Yates. What is Phlegmone?

Tho. Gale. Galen affirmeth Phlegmon (or as we call it in English, an inflammation) to come of the flux of blood by y greater veines & arteries, vnto those which are lesser, & from them vnto those veines which are least of all (which bicause they are no greater then haire,) are called capillares. These veines being filled with this continuall flux of blood, part issueth out by the mouthes of the veines, & part by the cotes of the same, whereby the bodies spaces are filled, inflamed, distended and stretched out. And this tumor Galen calleth the inequal intemperature of the muscle. And note, that there are two kindes of inflammations. One which is called vera inflammatio, and this springeth of good & naturall blood. The other is named Non vera, comming of ill and unnaturall blood, and this is common to all inflammations.

John Yates. What call you Phygethlon?

Tho. Gale. What which Celsus nameth Panus, and this tumour is an inflammation of the glandulous parts in the necke, armpits, and grine, which if they be indurated after this inflammation, there commeth tumors, which is named Choerades, in latine Strumas; and Guido nameth them scrofulas, and then this tumor is numbred among flegmatike tumours. And is with vs vsually called the Kings euill, bicause the Kings and Quenes of England (by a diuine & peculier gift of God) do cure such as are molested with this infirmitie, when as no arte of Chirurgerie can take place. And this differeth much from that sicknesse which the Latines name Regium morbum.

John Yates. Wherefoze is it called in Græke Choeras?

John Field. Either of Stones appearing by the Seas, or

B. v.

else

An Institution

esse of swine which are often vexed with this tumor.

John Yates. As touching Bubo, Guido calleth it a flegmatike Apoptume, wherefore I will let that passe vntill we come to the reasoning of the same.

Tho. Gale. You seeme to accuse vs of error or ignorance, when as we should number flegmatike Apoptumes as you call them, amongst sanguine tumours. But I will this affirme boldlie, that Guido either meaneth some other tumor, which he so calleth, or else he repugneth manifestlie with Galens authoritie, for Galen maketh Bubo a simple inflammation of the glandulous parts in that flankes.

John Yates. I doe not accuse you, but rather shew you Guido his minde, which seeing that it doth not agree with Galens, I must giue place, & also prefer Galen before Guido. Wherefore I praye you procede with the other inflammations, and shew me what the tumor is which the Grekes call Phyma.

John Field. This tumor is a push which will presentlie as it were, come to suppuration, and it is called Phyma, by similitude it hath with puffes or mushrumps, springing out of the earth. And there be two kindes of these tumors, one coming of heate, another of colde, but we in this place doe number onelie the hot tumor among inflammations.

John Yates. Dothienes followeth next in order.

Tho. Gale. Dothienes in Greeke is called of Auicen, Al-demurenul, of Celsus Furunculus, with vs a felone or Cats baire, & is a sharpe swelling with inflammation, chancing in the fingers with dolour, and turneth to matter speedely, and these often haue a feauer toynd with them.

John Yates. What is Anthrax?

John Field. That same which we call Carbunculus, and is an ulcerous tumor, springing of grosse melancholike bloud putrified. This tumor followeth great inflammations, & there are two kindes of Carbuncles, then one more gentle and benigne, the other pestilentiall & mortall, and the Carbuncle is both with pusses, and also without.

John Yates. Guido maketh difference betwixt Anthrax and Carbunculus.

Tho

Tho. Gale. There is no difference at all, but that Anthrax is a Græke word, and Carbunculus a Latine. For Guydos difference, where he maketh Anthrax a maligne tumor, is no other thing than the pestilentiall Carbuncle. But his derivation of the name is more ridiculous, where he saith y Anthrax is said of Antra, which he saith signifieth y hart, but in what tongue Antra is used for the heart, y he left unwritten: sure I am, y it is neither Latine, Græke, nor Arabe word.

Io. Yates. Well, then I am herein satisfied touching the Carbuncle, what define you Gargareon to be?

John Field. Gargareon called in Latine Columella, is an inflammation of Vuula, like as Paristhymia or Tonsille, are inflammations of the kirkels, situated in the beginning of the fauces, Guido and other of his sect call them Amigdalas.

John Yates. Anecurisma is next.

Tho. Gale. This tumor is no other thing than a dilatation or rather relaxation of y arteries, whereby the blood & spirits are dispersed, making a soft tumor, which being pressed w y fingers, seemeth to vanish awaie, but y fingers taken again awaie, the tumor commeth to his wonted bignesse againe.

John Yates. If you doe in like sort set out what Gangrena and Sphacelus are, then you haue finished all such tumors as are referred to Phlegmon.

John Field. Galen in his second booke which he wrote to his friend Glauco, defineth Gangrenam to be a mortification of the member unconfirmed, springing of great inflammations. And Sphacelus, called of diuerse writers Aschachilos, and of the Latinists Syderatio, is the exact and confirmed mortification of the member.

John Yates. Then by your wordes I gather, that both Gangrena and Sphacelus follow after great inflammations, & that they two differ in this, that Gangrena is as it were in growing and increasing euer more and more towards mortification of the member, & Sphacelus is when as Gangrena ceaseth to corrupt further the member, & that is now perfectlie mortified and dead, void of all naturall heate, blood, spirits, and feeling.

Tho.

An Institution

Tho. Gale. You haue rightly sayde.

John Yates. Then seeing we haue thus ended such sanguine tumours as are referred to Phlegmon, I pray you in lyke maner procede in the cholerike tumours which are of like affinitie with Erysipelas?

Tho. Gale. We will so doe. Vnto Erysipelas are referred Herpes, Phlyctene, Epiphyctides, and Hydroa. But first we will define what Erysipelas is, and then procede to the rest.

John Yates. I thanke you that you will accomplish my request and desire.

John Field. Erysipelas being of much affinitie wth Phlegmon, called also of the latines, Ignis sacer, of vs, wild fire, or Saint Anthonies fire, is a fluxe of choler, staying about the skinne, nothing molesting the flesh. And it differeth frō Phlegmon, first that there is no pulsatiue dolour in it, then that in the inflammation of bloud, the colour is alwaye redde: in Erysipelas, the colour is yelowish pale. Last, that Phlegmon is an affecte of the muscules, and Erysipelas is onely of the skinne, and this is to be understode of Verum Erysipelas.

John Yates. Is there any more then one kynde of Erysipelas?

Tho. Gale. Haue you forgotten that which was before rehearsed of compound tumours? And that there was Erysipelas, Phlegmonosum, Oedematosum, and Scirrhosum? These be comprehended in deede vnder the name of compound cholerike tumours or Erysipelas illegittimum.

John Yates. So then you make two kindes of Erysipelas verum: and also illegittimum.

John Field. It is right so. And that which is illegittimate or not right Erysipela is also diuided into two kindes. The one comming of the groser and crueler sencerer choler, and is named Erysipelas, with ulceration; and the other choler hauing other humours mixed with it, as I saide before.

John Yates. Seeing then that I vnderstand what Erysipelas is, & how many kindes also there are of them: I pray you let me vnderstand what Herpes is, for that followeth next in order.

John

John Field. Herpes is that tumour and affection of the skinne which Hyppocrates so doth name, of eoroding and deuouring the skinne, for Herpo is that which is called in latine Serpo, whereof commeth Hērpis quasi serpens. And there is two kindes of Herpes, one called Herpes Estiomenos, so called, bicause it eateth and deuoureth: the other is named Cenchros, in latine miliaris, for that the tumour is like Millit seede.

John Yates. Guido doth speake of Estiomenus, in this wise. Estiomenus est mors et dissipatio membri: et propter hoc dicitur Estiomenus, quasi hominis hostis, cum putrefactione et mollificatione membri.

Tho. Gale. Where Guido saith, that Estiomenus is the death and dissipation of the membred, and for that is called Estiomenus, as who should say, the enemy of man, coming with putrefaction & mollification. I doe little in my indgement alow him, first that he leaueth the princes of Physicke, Hyppocrates, Galen, and Paulus, and followeth those of small learning and authoritie: and then that he will seeme to interpret that tongue in which he had small knowledge. For wher did he euer reade among the Grecians, that the tumour Estiomenus, was confounded with Spnacelus, which in daede is the mortification of the member. And againe, where learned he the derivation of Estiomenus, to be hominis hostis. But this may yet seeme tollerable in Guido, where that Auicen giuing occasion of errour to other, comprehending both kyndes of Herpes, vnder the name of Formica, doth also most absurdly comprehend myrmecias, (that is to say, Formicas, and is a kinde of wartes) vnder the name of Herpes, and so confoundeth both together. But this shal suffice touching Herpes.

John Yates. Then let me learne what Phlyctenæ are.

John Field. Aetius in his. xiiii. booke and. lxiij. Chapter, saith, that they are pustules coming of sharpe choller, like to the blisters which cometh of scalding water, & bring no vehemēt dolour or paine, which being broke, there floweth out a yelowish humour, continuing vnto the third, or sometime the fourth day.

Thom

An Institution

John Yates. And what both these kinde of pustules differ from those which are called Epiniëtides?

Tho. Gale. Very much. For Epiniëtides, be the most ill and malignant kinde of pustules, be swart, and leady in coulour, with great and vehemēt inflammation about the, and these being opened, there is found a slimy exulceration in them. This tumour is neuer greater then a beane, and is called Epiniëtis, bicause commonly they spring in y^e night season, and then most molesteth the patient. The Arabians call this tumour effare, or faire, and Plinie nameth it pustula lyuens.

John Yates. Where it remaineth those tumours which the Grecians doe call Hidroa, and the latinessees Sudamina.

John Field. Auicen nameth them planta noctis, and Rasis, Alhalaphum. These are certaine cholericke pustles, coming of much and abundant sweet, which thzough the sharpnesse thereof, doe exasperate and vlcerate the skinne: and thus haue you learned the famous and notable chollerike tumours, wherefoze we will now conuert our talke to such as are phlegmatike.

John Yates. You doe meane such as are referred to Oedema, doe you not?

Tho. Gale. Yes verely, & they be called by their names, Atheroma, Steatoma, Meliceris, Hidrocele, Ascites, Leucophlegmatia, Chazras, Bronchocele, and Hydrocephalon: and as touching Oedema, it is thus defined.

Oedema, is a tumour soft, loose, and without dolour or griefe, springing of fleume, and it is deuided into Oedema, that is a disease, and into that which is Symptoma, or accident. Of this Galen maketh mention in the. xliii. booke, liii. Chap. of his Therapeutike methode. The true Oedema, is y^e which foolishly the barbarous Chirurgions call Vndimia.

John Yates. I remēber Guydo nameth it both Vndimia, and also Ydemea, and Cimia, but let that passe. I pray you set out those thre famous apostumes flegmatike, which you call Atheroma, Steatoma, and Meliceris.

John Field. This apostume called in latine Abscessus, and of Haliabbas, Sela, of Auicen, Nodi, haue diuers names
after

after that thing which is in euery of them contained.

For Atheroma, which is a tumour of like colour on all parts, and without paine and doleour, containeth in the nervous coates, a stymy humour, and lyke a pultesse in substance. And sometime there is found in it haire, & scales like bones, and hard things as they were stones. And Steatoma, that is to say, Adipinus nodus, or a fattie knot or a tumour, is an augmentation of fatnesse against nature, gathered in some part of the bodie. Meliceris or Nodus mellæus, is a round tumour, hard, & boyde of grieve, in which the nervous coates doe continue an humour lyke in substance to Honey. And all these three effectes are first smal and little, and so by little and little, augement and ware, and are contained with in their severall filmes or coates.

John Yates. What define you Hydrocele to be?

Tho. Gale. Hydrocele is that which in Latine is called Hernia aquosa or Humoralis, and is a tumour springing of a watry humour, gathered in the purse of the testicles.

John Yates. And what is Ascites?

John Field. It is one kinde of the dropsie, and this tumour is, when that a serose humour is contained betwixt the inward coate of abdomen and the intestines. This coate is called Peritonæum.

John Yates. Leucophlegmatia followeth next.

John Field. It is also named Anasarca and hypostarca, and is an inequall tumour going through the whole bodie: this may in my conceit be aptly termed, an vniuersall Oedema, of all the bodie: as touching Cherades, we haue spoken among Sanguine tumours.

John Yates. There yet remaineth two tumours Bronchocele, and hydrocephalon.

Tho. Gale. Bronchocele, is a tumour in the throte called also Bocium, and it is a great and round swelling of the necke betwixt the skinne and Aspera arteria, in which is contained sometime, flesh, sometime lyke Honey, fatnesse, or a pultesse, & sometime saith Celsus, ther are found haire mixed w bones. Also Hydrocephalō, is a watrie tumour ingedged for y more part in y heds of childre, or else it come of grosse

An Institution

grose blood collected in any part of the head : there be foure kyndes of this tumour, one when the humour is betwixt pia mater, and the braine : the second, when the humour is collected betwixt the coates and the bones : the third, is betwixt pericranium and the bone : the last is, betwixt the skinne and the bone. And thus we haue set out the most notable kindes of flegmatike tumours.

John Yates. Seeing that you haue finished thre kindes of tumours, Sanguine, Cholerike, and flegmatike, now I pray you let vs speake of Melancholicke in like sort.

John Fielde. Vnto Scirrhus, are referred, Cancer, Elephantiasis, Satirasmus, Pfora lepra, Enchymoma, melasma, varices, sarcocoele, Polipus Verruce, acrochordines, myrmeciae, & such lyke. And first we will take our beginning with Scirrhus, you shall note that there are reconed of Galen, two kindes of Scirrhus, one that is exquisite, the other not exquisite. The exquisite Scirrhus, is defined to be an hard tumour against nature, without dolour or feeling, and is incurable. The second kinde of Scirrhus, is also a tumour against nature, hard, but not altogether insensible, & therefore curable: although it be not without difficultie.

John Yates. Now seeing I haue learned what Scirrhus is, & also how many they are, I pray you proceede to Cancer.

Tho. Gale. Cancer called of y Grecians, Carcinoma, and Carcinus, is an inequall tumour against nature, horrible to beholde, of watrish coulour, and with great paine. It is called Cancer, of a figure and similitude it hath with the sea Crabbe: for like as in that, the feete are on both sides of it, so on this tumour, the veines being filled with grose melancholike humour, they are swolne and discended like as it were the feete of a Crabbe. Or this tumour may otherwise be called Cancer, because it doeth so inseparably cleaue to the place where as it once is firmly fixed. And there be two kindes of Cancer, one that is with vlceration, and is called Cancer vlceratus, an other that is without vlceration, and is named Cancer occultus.

John Yates. What is Elephantiasis.

John Field. It is an vniuersall Cancer of the bodie, and is that

is that which the later writers of the Arabians name Lepra, and Saint Lazarus sicknesse : it taketh name of the beast called an Elephant, because of the greatnesse of the affeet, length, and roughnesse of the skinne. It is also named Leontiasis, because of the loose & rugose tumour of the skin. This sicknesse is terrible, contagious, and in the number of those infirmities placed, which are contagious.

Thomas Gale. And when this tumour is yet in the beginning. It is not called Elephantiasis, but Satyriasmis, taking that appellation of the Satyres, whom the Poets described to be deformed and monstrous.

John Yates. Seeing that Elephantiasis is not Lepra Grecorum, I praye you shew me their difference?

John Field. Galen in his booke of Definitions, doeth define it in this sort. Lepza is mutation of the skinne into an habite against nature, with asperitie and itching, dolour & scales, and occupieth diuerse parts of the bodie, and there is no small affinitie betwixt Lepza and Scabies, both being affections of the skin, both springing of melancholie Iuse, & they differ in figure, for Lepza occupieth & denoureth deepe lie the skinne in round figure, and casteth scales like fish : & Scabies called also Psora, infesteth rather the vpper part of the skinne, and is diuerslie figured.

John Yates. Enchymoma followeth next, and Melasma.

Tho. Gale. Galen in his booke De tumoribus præter naturam. 10. Chap. saith, that they are tumours happening to olde men through the confusion of the veines, whereby the bloud flows out of the coates of the veines. Of these some be blacke, some betwixt blacke and red in coulour, and they come of small and light occasions.

John Yates. The next tumors are varices, in Græke called Cirsous, which I take to be the swelling of the veines through too great flux of grosse and melancholike bloud. And I haue most commonly seene them in the shanks & testicles.

John Field. And those be the proper places for this tumor : like as the two tumors next following, Sarcocoele and Polypus, haue their peculiar parts which they doe infest, as Sarcocoele is a fleshy tumour growing in the testicles, and is

C.

called

called in Latine *Hernia carnosa* : the other is a fleshie
branch springing in the noſethzils, and letteth the operation
of the ſame, and it taketh name of the fleſh called *Polipus*,
ſoꝛ like as that fiſh hath many legs, ſo alſo hath this tumor
many roots wherby it cleaueth and groweth to y^e noſethzils.

Tho. Gale. It is right ſo, and *Verruca* which is next in
order, is a certaine tumor appearing in the vppermoſt part
of the ſkinne, it is named with vs a Wart, of this ſoꝛt be
Acrochordones, & *Myrmecia*. *Acrochordon* is a round wart
hanging as it were by a threed, and thereof taketh name,
and is called in Latine *Verruca penſilis*, & *Myrmecia* is alſo
a kinde of warts which groweth deeper and is hard and fix-
ed to the ſkinne, narrow aboue, & broad beneath, prouoking
dolour & paine, and is blacke in colour. And thus haue wee
finiſhed and declared vnto you al the notable tumors which
are referred to the ſoure ſimple, *Phlegmone*, *Eryſipelas*, *Oe-
dema*, and *Scirrhus*.

John Yates. Yet among all theſe I heare you make no
mention of *Morbus*, which I thinke is to be numbred a-
mong tumors againſt nature.

John Field. I doe not well vnderſtand your meaning,
ſoꝛ many a tumor is called *Morbus*, ſoꝛ *Morbus* is a Latine
word, and all ſickneſſe and infirmities be called *Morbi*.

John Yates. Yea, but I meane that ſcab which the comon
Chirurgions calleth the *Morbus*, and the *Morbus* cauſe, and
the better learned nameth it *Morbus Gallici*.

Tho. Gale. It is a great thing to be trained vp in igno-
rance oꝛ barbarous doctrine at the firſt, ſoꝛ euer after doe
what you can, they will haue ſome taſt thereof, as right ex-
cellently the Poet *Horatius* ſaid.

Quo ſemel eſt imbuta recens ſeruabit odorem,

Teſta diu, &c.

Which is as much in effect to be vttered in our vſuall
language, as

With what thou firſt fiſt thy veſſell,
of the ſame long time it will ſmell.

And this may right well be veriſied with thoſe of our
time, one rude Emperike called it the *Morbus*, and a num-
ber

ber followeth him in his follie, & another because he would seeme cunninger than the rest, with as much ignorance nameth it Morbus Gallici, breaking the olde Physicians head, and yet will not or cannot giue him a plaister. But if you will vse that vsuall name, you might haue named it Morbus Gallicus, or Lues venerea, and so haue obserued congruities in speaking, but as touching the names of that contagious infirmitie, which is vsuallie named Morbus Gallicus: in my opiniõ they all do nothing expresse y^e nature of y^e sickness: & like as the authoꝝ which write of it, varieth in the names, so doe they both in knowing the disease, and cure of y^e same.

John Yates. What then shall I properlie call it?

John Field. The same that Maister Doctoꝝ Cuningham hath inuented a similitudine cum Chamæleonte bestiola. That is, he calleth it Chamæleontiasis. The reasons hereof, the definition, cause, signes, prognostications, & new kind of curation, he hath expessed in a booke thereof wzitten, which I trust he will hereafter publish.

John Yates. And doth he not number Chamæleontiasis among tumoꝝ against nature?

Tho. Gale. Nothing lesse, for he accoũteth all those tumoꝝ, swelling, knots, vlcers, and such like, infesting the bodie of man, but as accidents, and no part of the infirmitie, neither laboureth he so much in these, as in expelling the sicknesse which bringeth forth these accidents, for these are to be removed without difficultie or great trauaile.

John Yates. I iudge his new inuented waie of curation to be extreme & dangerous to the patient, for both y^e fumes, vnguents, and straight order of diet, with the wood, are wel known to be daungerous, and yet many times doth not that which they promise, but yet if his waie be perfect, it is the moze to be liked, and he woꝛthie of praise.

John Field. His waie is boide of daunger, easie to the patient, exact also and perfect.

John Yates. Seeing then that Chamæleontiasis, vulgarlie tearmed Morbus Gallicus, is not to be numbered among tumoꝝ against nature: I praise you proceed to y^e other part of your diuision, for I remember y^e you said there were

An Institution

three kindes of tumours, the first you called Humoralis, because it doth spring of humours, the second Ventosus, for that it is engendered of spirits, the third you tearmed Tumour Varius, because they haue mixed causes, sometime of humours and spirits mixed, and sometime of other causes. Therefore I praye you now let me learne how many tumours are referred to ventosus tumour.

Tho. Gale. The most famous are two, Tympanites and Priapismus.

John Yates. What is Tympanites?

Tho. Gale. That which Hippocrates nameth a drie droppe, and is a tumour springing of windie spirits, collected betwixt Peritonæum and the intestines. And if you smite the bodie of the patient bered with this tumour, it will giue forth a sound like to the Tympanie, and hereof it first toke name.

John Yates. And what tumour is that which is called Priapismus?

John Field. Priapismus is a tumour of the yard, whereby it is descended out in length and breadth through vaporous spirits, filling the nerue called Nerus cauenosus constituens colis substantiam.

John Yates. There remaineth to speake of those tumours which you tearme Tumores varios.

Thomas Gale. There doth so as you saie, and these be the notablest of those tumours, Vitiligo, Exanthemata, Parotides, Mentagra, Epiplocele, Enteroccele, Enteroëpiplocele, Bubonocel, Exomphalos, Arthritis, Podagra, Chiragra.

John Yates. What call you Vitiligo?

John Field. If you will generallie take it, it signifieth a foulness and straining of the skinne, comming of the ill disposition of the part, which cannot make good assimilation of the nourishment, & there be two kindes of this tumour, the one named in Græke Leuce, of the Arabians Albaras, and in Latine Vitiligo alba, which is a mutation of the skin into more whitenesse. The other is named Alphos, & of Auicen Morphea, & we vsuallie call it y Morpheu, & there are two kindes of Morpheu, the one white called of Celsus Leuca Alphos

Alphos, the other blacke, & he tearmeth it Mela, and Alphos is deriued of this Græke verbe Alphenein, which signifieth to alter or chaunge, and so doth the Porphew alter & change the coulour of the skinne.

John Yates. And what tumours are those which y^e Grækes doe call Exanthemata?

Thomas Gale. They be pustules and tumours breaking out of the skinne, bzinging with them scauers, and many other accidents. And there are two sorts of them, one higher springing of thin and cholerike bloud, the other broader, & commeth of melancholike and grosse bloud. The first kinde we call the small pockes, in Latine Morbilli, the other the Measels, and Variolæ in Latine.

John Yates. Parotides followeth next in order.

John Field. Parotides be inflammations which happen to the kirkells that are behind the eares, and they spring sometime of sincere bloud, sometime of fleame, sometime of cholar, and sometime of melancholie. And heerein note the providence of nature, for she hath made the rare and loose parts called kirkells, to be as emundozies for the noble parts. As the kirkells behinde the eares serue to the braine. Under the arme piz, seruing to the spiritual members. And the kirkells in the grine doth receiue y^e superfluities that commeth from the liuer, when as it doth exonerate and purge it selfe, and this is most manifest in pestilentiall constitutions, in which these noble members thrust and expell the venim to their purging places.

John Yates. As for Mentegra, you need not to speake of, for I know right well, it is no other thing than Morbus Gallicus, or Chamæleontiasis, as the booke bearing the name of Mentagra doth testifie.

Tho. Gale. And yet both you & the autho^r of that booke do heerein misse the cushion, as sure as you make your selfe of this. For this tumour which Plinius calleth Mentagra & Impetigo, in Græke Leichin, sprang first among the Italians in the time of Tiberius, and is a deformitie of the skinne, beginning for the most part at the chin, and will speedelie turne into leprozie, and cast off scales like fish. And Galen

Witnesseſh in the vi. booke and v. Chap. Secundum loca. That Impetigo will turne into Leporam. Therefore what difference is betwixt Mentagra and Chamæleontiaſis, it is eaſily conceiued, the one hauing Cauſam occultā, as I may tearme it, and the other Maniſteſtam.

Io. Yates. And what iudge you Epiplocele to be ?

John Field. I will not onelie ſpeake of that, but alſo of the other kindes of Hernia, which followeth next. And firſt you muſt note that Epiplocele is a Greeke word, compound of Epiploon, which the Latiniſts call Omentum, & we name it the Caule, and Cele, which ſigniſieth Ramex or Hernia, ſo that Epiplocele is a tumor comming when as Omentum falleth into the purſe of the teſticles. And by the like reaſon Enteroccele taketh name, when as the inteſtines falleth into the ſoꝛeſaid place. And Enteropiplocele followeth, when as both Omentum and the inteſtines fall in Scrotum, or purſe of the teſticles. Furthermoze Bubonoccele is a tumor called in Latine Inguinis ramex, and happeneth when as Peritonæum is ruptured or wounded by the flankes. Exomphalos is a tumour pertaining to the ouerthwart muſcles of Abdomen, which being relaxed there followeth a ſtaring or eminencie of the nauell.

Tho. Gale. My brother Yates doth the readier lie conceiue & differences of theſe kindes of Hernia, for that he hath a peculiar way of curing ſome of theſe, eſpeciallie of Enteroccele, or hernia inteſtinalis, as Guido termeth it, wherefoze we will no longer ſtand in uttering the differences of theſe, but procede to Arthritis, Podagra, & Chiragra. For I thinke y daie will ſcarcelie ſuffice to declare that which yet remaineth, & therefore as touching Arthritis, you ſhal note and conſider, that it is a tumor comming of the flux of humors into the ioynts, & is named in Latine Morbus articularis. And ſo is this tumor common to all the ioynts of the bodie, except it be the hands and the ſeete.

John Field. Yea, for if this fluxe happeneth to the hands, it is named Chiragra, and if to the ſeete, then it is called properſia of the place, Podagra.

John Yates. Theſe diſeaſes of the ioyntes be grieuous & painfull,

painfull: haue they no other cause but the fluxe of humours?
 Tho. Gale. The fluxe of humours is but the interne or antecedent cause, which commeth of the primitive, but it is no part of our mindes, to set out either the causes, signes, or curation of tumours, seeing that we haue done that in our booke of the methodicall cure of tumours against nature.

John Yates. Seeing that you haue now spoken of all the notable and famous tumours against nature, I praye you turne your talke to woundes, which Auicen and those that follow him calleth Plaga.

John Field. Before we enter further herein to set out the differences of woundes, it is conuenient to know what a wound is. And the most part of writers agree that a wound is the solution of continuitie made in the parts of the body without putrefaction or matter.

Tho. Gale. Yea, for when as putrefaction or matter doth followe, then it leaueth the name of a wound, and is called an vlcer.

John Yates. And may a wound degenerate into an vlcer?

Thomas Gale. Yea, so sooth, and so doth most partes of woundes, especiallie if they be great, and in such partes as may not be cured with balmes.

John Yates. And how many differences be there of woundes?

John Field. Namely, but the chiefe and principal and that also are necessarie, are numbered to be three, and we will shew you whereof the differences spring.

John Yates. Doe you so?

Tho. Gale. Guido and other famous writers of his time taketh the difference of woundes, of three things. The first is taken of the nature of the parte, in which the wound is made. The second difference springeth of the substance or essence of the solution of continuitie. The third difference springeth of the difference of the diuision, or solution of continuitie.

John Yates. And how are the woundes called. Those differences commeth of the nature of the part in which that wound

wound is.

John Field. It is called a wound in the simpler part, and a wound in the instrumentall part.

John Yates. When to know these wounds exactly, it doth behoue to know these parts of the bodie, which you called simpler and instrumentall.

Tho. Gale. It doth right so, and it is so called a simpler part because it is simple, & may be divided into like partes, and that also which is required to the constitution of the organike or instrumentall parts. Such parts of the bodie are flesh, fatnesse, arterie, veine, nerue, tendon, ligament, bone, and such like, & those be named instrumentall parts, which are made of these simple or simpler partes. And the instrumentall partes are the head, eye, nose, tongue, heart, liuer, lungs, armes, feete, and a great number of such like, and euery of these partes haue their senerall vse and office, as moze largelie appeareth in the booke of Galen, intituled, De vsu partium.

John Yates. And how many sundrie wounds are there in the simpler parts.

John Field. There be three, which are taken of the substance of the simpler parts, for it may be in the simpler parte, which is soft, as wounds made in the flesh, and fatnesse, or else in the harde simpler parts, as wounds in the bones, or finally it may happen to the meane simpler parte, which is neither harde nor yet soft, such be those woundes in the Veines, Arteries, Nerues, Tendons, and Ligamentes.

John Yates. And what difference is there of the wounds in the organike or instrumentall parts?

Tho. Gale. There is a three fold difference of those wounds according to the parte affected. For either the wound is made in the principal parts, as in the heart, liuer, or braine, or else in those partes which serue these principall parts, as wounds in Aspera arteria, the throte, and bladder. Or it is in the organike parts, which are not seruiceable, to anie of the principal, as wounds happening in the nose, eye, eare, hand, foote, and such like.

John

John Yates. When there be five differences of woundes taken of the nature of the part, three in the similar, & three likewise in the instrumentall parts. Now let me vnderstande the difference of woundes taken of the essence of the solution of continuitie.

John Field. There is a twofolde difference, for either it is a simple wound, or else it is a compound wound.

John Yates. What is a simple wound?

John Field. A simple wound is solution of continuitie, newly made, being voyde of accidents or other affects with it complicated and ioyned.

John Yates. And what is a compound wound?

Tho. Gale. The contrary to a simple wound. For it is solution of continuitie, hauing one or more affects and accidents complicated and ioyned with it.

John Yates. You haue now showed two kinds of woundes, the one taken of the nature of the wounded part, the other of the essence of the solution of continuitie, there yet remaineth to set out, such as spring of the proper difference of solution of continuitie.

Tho. Gale. There doth so as you say, and the proper differences are taken of two thinges. That is to wit, of the quantitie and of the figure?

John Yates. And how be the woundes named, which haue their difference of quantitie.

Tho. Gale. They are called by these names, a great or little wound, a long or short wound, a broad or narrow wound, a deepe or shallow wound, and an equall, or else an inequall wound.

John Yates. And how be those woundes named which are taken of the figure of the wound?

John Field. They be thus termed, a right wound, an oblique or crooked wound, and a retort wound. There are besides these three principall differences of woundes: other woundes, although they be not proper, as a wound disrupted or broken, a wound which is cutte, a wound partly broken, & partly cut: also, a wound in the beginning, middell, or ende of a muscle, & such like, but these differences alredie

An Institution

numbred shal suffice, as touching the Institution of a Chyrurgion, in this part.

John Yates. I suppose no lesse. But what vtilitie springeth by knowing these differences of wounds?

Tho. Gale. Right great, for you shal not rightly and methodically cure them, except you know their differences.

For of them is taken the prognostications, the intentions curatiue, the inuention of medicines, and maner of curati-
on, for you will not a like prognosticate lyfe and death to the patients, of a simple wounde made in the flesh, and of a great wound made in the ventricles of the braine.

John Yates. That is verely so, for the one is without perill and danger, and the other euer mortall and deadly. Although Galen affirmeth, that his maister Pelops, yet being a liue, he saw a young man wounded in one of the former ventricles of the braine, & that he was restored to helth.

John Field. In deede those wounds for the more part are deadly. And where as Galen in his eight booke de vsu partium, reherseth that historie, he maketh it miraculous, & that the young man came to health, rather by the goodnesse of God, then the helpe of arte. But let vs returne from whence we are digressed. A grene and shalow wound, boide of accidents, haue not the same curatiue intentions, that a deepe & holow wound hath, with which is also annexed, inflammation, flux, dolour and paine.

John Yates. That is more clearer then Sunne at myd daye, as the saying goeth.

Tho. Gale. And touching the inuention of medicines, how say you, will you inuent lyke for wounds in the nerues and ligaments, that you will for those in the flesh? or in woundes of the braine, that you will in woundes of the handes?

John Yates. No verely, nor I thinke none so rude, that will so offende.

John Field. I pray God ther be not. But to the right vse of medicines take of the difference of wounds, would you in a wound in which is inflammatiō, & deperditio and losse of flesh, apply incarnatiues to cease inflammation or contrary wise?

John

John Yates. That were a point of extreme demency and madnesse.

Tho. Gale. Well, then this last vtilitie springing of the difference of wounds, sheweth you how to apply your medicines, and whan also: which must be first, and which next.

John Yates. No man can that denie. Wherefoze seeing that we haue passed ouer the differences of wounds, it followeth next in order, that we doe procede to vlcers.

John Field. And y you may the better vnderstand those things which hereafter shall follow, it is requisite to learne first what an vlcer is.

John Yates. When I pray you define what an vlcer is.

John Field. An vlcer is defined to be the solutio of vnitie in the fleshie partes, having moze dispositions letting & hindring the adglutination of the same, of which cometh matter, and other lyke filthinesse.

Tho. Gale. You may also briezely define it, following Auicen in this maner. An vlcer is the solution of continuitie, made in the flesh, conteining matter and pus.

John Yates. And whereof are vlcers ingendred?

Tho. Gale. They spring of wounds ill handled, of pustules and apostumes, comming to vlceration.

John Yates. And doth vlcers spring of wounds?

John Fielde. They doe. For when as a wound doth once cōtaine matter, it is no moze called a wound, but an vlcer.

John Yates. How many kinds of vlcers be there?

Tho. Gale. There be two kindes, a simple vlcer, and a compound.

John Yates. And what is a simple vlcer?

Tho. Gale. A simple vlcer is a solution of continuitie, with matter, voyd of accidents & complication, with other affectes. And here you must note, according to our supposition, that when I say a simple vlcer, I meane not one simple infirmitie or sicknesse: for I am not ignorant that euery vlcer doth consist of intemperatenesse, solution of continuitie, & sometime also of ill cōposition. And therfoze when I speke of a simple vlcer, I meane that which is opposite or cōtrary to y vlcer, which is cōplicated with many affectes.

John

An Institution

John Yates. Then by your wordes I gather, that a cō-
pound vlcer is solution of continuitie in the fleshe, hauing
mattier, & diuers affectes with it ioyned. Now I pray you
let me vnderstand how many differences there be of vlcers.

John Fielde. The most notable vlcers are. vi. in number.

John Yates. Which be they?

John Field. Their names in Latine be these, Vlcus fa-
niosum, Virulentum, fordidum, cauermosum, putridū & cor-
rodens. And we must by circumlocution, make them plaine
vnto you, for the defect of apte wordes in our language.

John Yates. And can these haue no other names.

Tho. Gale. Yes forsooth.

John Yates. How many wayes?

Tho. Gale. Fiue principall wayes.

John Yates. Which are they?

Tho. Gale. First an vlcer may be named of humours,
next of sanies or mattier, then of accidents, after of the sick-
nesse, last, of similitude with some liuing thing.

John Yates. Which way name you vlcers of humours?

John Field. Those which spring of blond, are called sā-
guine, of choler, cholerike, of fleume flegmatike, and of me-
lancholie, melancholicke.

John Yates. And how are they called which come of sa-
nies or mattier.

Tho. Gale. You must note that vlcers be named of sa-
nies, foure sundry wayes.

John Yates. How so?

Tho. Gale. Because sanies is called by foure names.

John Yates. Which be they?

Tho. Gale. Sanies, Pus, Sordicies, and Virulentia, & hereof
cōmeth that of Sanies, the vlcer is named a sanious vlcer, of
Pus, a purulent vlcer, of Sordicies, a filthie vlcer, and of Vi-
rulentia, the vlcer is named a virulent vlcer.

John Yates. Before you procede further herein, I praye
you define me what Sanies or mattier is.

John Fielde. Sanies is a nozishment corrupt, which na-
ture could not digest: and note, that there is two kindes of
Sanies, good and laudable, and also ill and nought.

John

John Yates. What call you good mattier or sanies?

John Field. It is called good, when as it is white in colour, light and equall, boyde of stinke and horrible smell, and is also digested.

John Yates. And what define you ill mattier or sanies?

John Field. It is that which is contrary to the good. A corrupt nourishment in which the substance is unequal, indigested, ill smelling, and diuersly discoloured.

John Yates. What is that you call Pus, of which the vicer is named purulent.

Tho. Gale. It is ill mattier or sanies, comming of nourishment and superfluities of the weke member, which tendeth to corruption, thzough the naturall heate altered into an vnnaturall state.

John Yates. I pray you let me learne what Virus is.

Tho. Gale. It is subtile and thinne sharpe sanies, ingendzed of thinne watry humours, which thzough the abundance, the heate can not digest and ouercome.

John Yates. There yet remaineth to speak of that kinde of sanies which you called sordicies.

John Field. It is grosse mattier ingendzed of the grosse- nesse of humours.

John Yates. Well now returne againe to the names & appellations of vicers. Now I pray you are vicers called after accidents, which the Grekes call Symptomata?

Tho. Gale. It is called of corrosion a corrodng vicer, in Greke Phagedenicum, of putrifaction vlcus putridum, of dolor and paine, it is called vlcus dolorosum.

John Yates. And how is the vicer called of sicknesse.

John Field. It is called in this maner of Cancer, a cancerous vicer, so in like manner of Fistula, the vicer is called Fistulosum or vicer fistulate.

John Yates. Seing you are come to that talke of a fistula, in knowledge of which, and also exact curation, you are not a little commended: I pray you define what a fistula is.

John Fielde. It is an hollow and deepe vicer, hauing a straight orifice, and the holownesse of the same is hard, out of which many times floweth matter, and the fistula hath many

An Institution

many denominations according to the place in which it is, for when it happeneth onely in the flesh, it is called fistula carnosa, in the veines venosa, in the arteries, arteriosa, in the nerues or sinnowes, nervosa, in the cartilages cartilaginosa, in the muscles musculosa, in the bones ossea, and also of teares and drops, which it putteth forth, it is named fistula lachrymalis: so in ano, it is called fistula ani.

John Yates. Well, now turne we againe to the last part of the diuision, and shew mee how vlcers are called of similitude.

Tho. Gale. I will. The Ante or Pishmere (in latine Formica) crepeth and maketh holes: and of like sorte, the vlcer which crepeth and maketh many holes in mans body, is hereof termed Formicosum vlcus: and also of the holow caues of the ground called cavernæ, the holow vlcer is named cauernosum: and so in like sort of other things, for of the similitude the vlcer taketh name.

John Yates. I heare you not make any mention of those famous and notable vlcers called Teliphea and Chironia vlcera, neither can they be comprehended vnder any of the sixe principall kindes of vlcers.

Tho. Gale. Yes so, soth, but Galen whom I follow, accōp- teth those differences of Teliphea and Chironia vlcera, superfluous, and he comprehendeth them vnder the name of Phagedenicum, or Corrodens vlcus. Therfore we may aptly place them among corroding vlcers, which is the sixt kinde of the notable vlcers, before rehearsed.

John Yates. And be all these kindes of vlcers of like facilitie in curing?

John Field. No verely, for there be some which are easily cured, and other also which will hardly or not without great difficultie, receue curation.

John Yates. Which be those that will easely be cured?

John Fielde. Such vlcers as happen in persons of good cōplexions, whose bodies are nourished w good bloud, & haue no abundance of superfluous moistnesse: for Auicen saith, that in bodies of the best complexion, the vlcers are more speedely healed.

John

John Yates. Which vlcers are hard to be cured?
 Tho. Gale. All those vlcers which followeth after any
 sicknesse.

John Yates. Wherefoze should those vlcers be so rebel-
 lions, and hard to receiue curation?

Tho. Gale. Bicause nature doth exonerate & unburthen
 hir selfe of the dregges and reliques of ill and vicious hu-
 mours.

John Yates. Are there no other vlcers, but these that be
 hard to cure?

John Field. Yes, and such be all vlcers which happen to
 persons hauing accidentally their bodies moist or drye.

John Yates. Giue me an example of those bodies which
 accidentally are moist.

John Field. You neede no other exāple to set befoze your
 eyes, then persons hauing dropfies, and women with child,
 where vlcers happen in such bodies, they will not cicatrize
 bicause of abundance of superfluous moisture.

John Yates. I thinke it so. But if that the great moist-
 nesse, do let y^e vlcer to be cured, then in bodies that be dry, it
 foloweth y^e vlcers to be easely healed. How hapneth it, ther-
 foze y^e you affirm vlcers in dry bodies to be hard of curatio?

John Field. And yet in these my wordes, I doe not comit
 any errour. For I speke not simply of all dry bodies, but of
 those that ware dry accidentally, such be the bodies of them
 that haue heticke feuers, & marasmus. In these the vlcers,
 for defect of good blood, cannot consolidate, but with great
 difficultie.

Tho. Gale. And you haue also the lyke example in olde
 men whose vlcers will hardly receiue cure for the defecte of
 good blood, they being not able, for the imbecillitie of natu-
 rall heate, to concoct and digest, their meate.

John Yates. When by your wordes I doe finde, that in
 thre sortes of people, the vlcers wil not without difficultie
 be cured, y^e is to saye, in those where vlcers foloweth great
 sicknesse, & in bodies which are accidetally moist, & those al-
 so which are likewise dry. Now befoze we finish our talk of
 vlcers, I would learne of you what putrifactio, cozzosion, &
 di-

An Institution

digestion is, the knowledge of these is right profitable in vlcers.

Iohn Fielde. It is so, and note that, putrifaction according to our authoꝝ Chirurgions, is defined to be a transmutation of the whole substance of the bodie or part of the same, springing of outward and vnnaturall heate: which being contrary and deadly enimie, to naturall heate, doth corrupt and destroy the same.

Tho. Gale. And corrosion is a consumption of the flesh which commeth through sharpe humours, which resolue, consumeth, and dryeth, the substance of the nourished part, which being resolved the substance of the flesh is diminished and ulcerated.

Iohn Yates. These two, putrifaction and corrosion, seemeth to be as you saye, although for want of naturall Philosophie, I cannot herein iudge, but it behoueth the learner alwaies to beleue and credit the teacher: but what is digestion?

Iohn Fielde. Digestion is taken in two wayes, one way it is taken for an orderly distribution of the worke of naturall heate made for the augmentation and nourishment of the parts. The other way it is a disposition of natural heat ordeined to the preparation of humours, whereby the humours are made redie to be thrust out by the vertue expulsive, and this last way is that which the Chirurgion ought to consider.

Iohn Yates. Now you haue thus finished tumours against nature, wounds, and vlcers, it is time to intreate of fractures. Wherefore I pray you let me vnderstand what a fracture is.

Tho. Gale. A fracture is called in Greeke Catagma, and is solution of continuitie, made in the bone. But the later Grecians as Actius and Paulus, nameth a fracture, the diuision of the bone, or els rupturing or breaking of the same, or any solution of the bone, violently comming of any outward cause.

Iohn Field. Pet Guydo de Caulico, and other of his time, defineth a fracture to be solution of continuitie of the bone,
not

not comming of enerie cause, but onelie when as it cometh of contusion, and this difference he putteth, for y^e, saith he, a bone broken and a bone cut, may be knowen a sunder. For because a cut bone is not to be properlie named a fracture, but rather a wound in the bone.

John Yates. There is no great repugnancie among the, neither let vs be curious about wordes, so the thing whereof we intreate may be euident and plaine. Wherefore I praie you shew me now howe many kindes there bee of Fractures?

Tho. Gale. There be two kindes of fractures, a simple fracture, and a compound.

John Yates. What is a simple fracture?

Io. Field. A simple fracture is solution or diuision of continuities made in the bone without anie other affect ioyned with it?

John Yates. What is a compound fracture?

John Field. It is also a solution of unitie made in the bone, hauing one or moze affectes to it connected and ioyned.

John Yates. How many differences be there of Fractures?

Thomas Gale. You must note, that like as there be simple and compound Fractures, so in like manner there bee differences of fractures both simple and compound. Wherefore let me knowe of which fracture you would knowe the difference.

John Yates. I would right gladlie vnderstand all the differences, although for want of knowledge I cannot orderly demand of you. Wherefore I praie you first to begin with the differences of simple fractures, and then to the compound.

Thomas Gale. That we will gladlie, and first it becometh you to consider that there be many and diuerse kindes of simple fractures. For some fractures are overthwart, and diuides the bone in sunder, and they are three, Cauledon, Raphanidon, Siciedon, that is to saie, the bones are broken lyke vnto the similitude of stalkes, of hearbes, Raddish, and Cucumbers. There are besides these si-

An Institution

tures or rifts made in the bone long wise, called in Greeke Schidacidon. Also there is another kind of simple fractures when as the bone is broken into many small and little peeces, and this is named Alplitidon. These be the principall differences of simple fractures.

John Yates. And what are the differences of compound fractures?

John Field. The chiefe and notable being accompanied with sicknesse and accidents, are these: a fracture with a wound, a fracture having with him ioyned Gangrena, a fracture with inflammation, a fracture with dolour and paine, a fracture with confusion, a fracture with Callus too much increased and growen, a fracture with too much drynesse, & also hardnesse of Callus, & a fracture with superfluous moisture of Callus, and such like.

John Yates. Are there no other kinds of fractures besides these two simple and compound?

Tho. Gale. There be no other proper kinds, for of necessity it must be either simple or compound, and Galen maketh but two kindes of simple fractures, a fracture made secundum longitudinem, and a fracture made per transversum. But Cornelius Celsus addeth the third difference to it, his words are these. lib. 8. cap. 7. Omne os, modo rectum, ut lignum in longitudinem finditur, modo frangitur transversum, interdum obliquum, &c. Which is as much to saie, as euerie bone is fractured, either in length, as wood cleauen, either it is broken ouerthwart, and sometime it is fractured, oblique, or crooked.

John Yates. Albucasis nameth other kindes, as fracture in Cranio, a fracture in the iawes, a fracture in the nose, a fracture of the spine of the backe, a fracture of the fossiles, & so of other bones.

John Field. We doth right so as you saie, but in my opinion these be no differences of fractures, but rather noteth the part affected.

Tho. Gale. That is most manifest, and hercof we haue spokē in our Enchiridion of Chirurgerie moze at large, where we set out the differences of Fractures, & the exact manner of

of curing them. But because you may the surer beare these differences of fractures surer in memorie, beholde this table which setteth out all the diuisions of them, and if you take paines to commit them to memorie, then you haue in effect the whole Theorike of solution of continuitie, made in the harder parts of mans bodie. ED

John Yates. I thanke you sir, & I will not omit the great profit which will follow for the present paine. For the gaine will remaine when as the paine shall be quite forgotten. Now for the time of the day which yet remaineth, finish luxations, and what else you thinke conuenient for the institution of a Chirurgion.

John Field. We will accomplish your request, and first note that a luxation or dislocation (which the Grecians also call Exarthrema) is a displacing of the ioynt, and mouing of it out of his natural seat into another place vnaccustomed, whereby the voluntarie motion of the same is hindered.

Tho. Gale. And this luxation is either perfect, as when the bones are quite diuided and put asunder, or else it is an imperfect luxation, when the ioynt is but onelie wrested, and not all together dislocated, this the Grecians call Pararthrema.

John Yates. How many kindes of luxations are there?

John Field. There be two kindes of luxations, a simple luxation, with which there is no difference ioyned: and a compound luxation, hauing one or more effects to it connected and complicated.

John Yates. What effects be those which are ioyned with compound luxations, or rather to speake properlie, what effects do make the luxation compound?

Tho. Gale. The most common are these, a luxation with a fracture, a luxation with Phlegmon, a luxation with a wound, a luxation with dolour, a luxation with hardnesse, a luxation with fluxe, and so in like sort you may number other effects, as they are with the luxation connected.

John Yates. You haue nowe finished your talke touching the definitions and differences of tumours against

An Institution

nature, wounds, vlcers, fractures, and last, of luxations, and among the rest you make thre of them to be solutions of continuitie, that is to saie, wounds, vlcers, and fractures: I pzaie you and were me, be there no moze kindes of solution of continuitie than these?

John Field. There is no solution of continuitie, but is comprehended vnder one of these thre, as you may perceiue by the differences of solution of vnitie, set out in the fourth booke of Galens Therapeutike methode.

John Yates. I pzaie you rehearse those differences.

John Field. There is a solution of continuitie left in the fleshy part after a wound called Thrauma. There is a solution called Helcos, whereas there is an vlcere in the flesh, there is solution of vnitie in the bone named Catagma. Also Spasma is a solution of continuitie in the nerue by conuulsion or distension. Apospasma is likewise in the ligaments. Rhegma is a rupture of the flesh. There is also a solution of continuitie called contusion, in Greeke, Thlasma, as is properly in the vessells. These are the principall kindes of solution. But now seeing we haue plainlie made discourse of all such sicknesse, as fall vnder that portion of the curatiue parte, which is called Chirurgerie, whereby you are taught to apply contrarie remedies, for the expelling of the forenamed griefes: it is requisite to vnderstand the operations which a Chirurgion must vse in obtaining his desired scope: I meane in restoring health to his patient.

Io. Yates. I pzaie you then let me learne what those operations are?

John Field. They be in number thre. First, to diuide or separate the continuitie. Secondlie, to vnite and ioine together, that is diuided and separated, and last of all, to take away that is superfluous.

Tho. Gale. And we diuide the continuitie by making incision, letting of bloud, and scarification, whereas neede requireth, as also wee vnite and ioine together that is diuided, when as we consolidate & conglutinate wounds, when as we heale fractured bones, causing Callus to grow out of the fracture, and when wee repose and put bones luxated and
dislocated

dislocated into the native and wonted seate. Last of all we doe take awaie that which is superfluous, when as we take awaie tumours against nature, as Ganglia, Cancers, Podes, Strumas, & warts, called Achrocordonas, also taking the water out of the bodies of those which haue a dropsie, or taking awaie the first finger or toe of the hand or foote.

John Yates. All this I will keepe well in memorie.

John Field. The Chirurghion must also in these his operations obserue five things principallie. First, that he doth it safelie, and that without hurt and damage to the patient. Secondlie, that he doe not detract time, or let slip good occasions offered in working, but with such speede as arte will suffer, let him finish his cure. Thirddie, that he worke gentlie, curteouslie, & with so little paine to the patient as conuenientlie you may, and not roughlie, butcherlie, rudelie, and without a comlinessse. Fourthlie, that he be as free from craft & deceit in all his workings, as the East is from the West. Fiftlie, that he taketh no cure in his hand for lucre or gaines sake onelie, but rather for an honest and competent reward, with a godlie affection to doe his diligence. Last of all, that he maketh no warrantise of such sicknesse as are incurable, as to cure a Cancer not vlcered, or Elephantiasis confirmed, but circumspectlie to consider what his effect is, & promise no more than art can performe, and you shall do these thinges much the better, (yea without these you cannot anie thing profit your patient) if you vnderstand the maner and exact waies of stitching wounds, of making tents, splines, stuphes, bolsters, and conuenient rollings, wherefore if the daie will thereto suffice, we will declare & make plaine these thinges vnto you, and so finish our talke of the institution of a Chirurghion.

John Yates. I praie you let no time be herein lost, for loth I were to depart without the knowledge of them, & for that you first made mention of stitching, I praie you first begin with it.

Thomas Gale. Then you must well marke & diligentlie consider that there are three kindes & manners of stitching, taking names of their effects. The first is called con-

D.iii.

gluti.

glutinate or incarnative: the second is named compres-
sive: the third is reservative. of these we will order lie in-
treate, and first touching incarnative stitching, note that the
use of it is in all greene and fresh wounds made in the flesh,
whose lips or sides cannot be conserved and kept together,
onely with rolling and ligature.

John Yates. And may not this kinde of stitching be used
also in olde wounds?

Tho. Gale. If you will use it in olde wounds whose lips
are hard and thicke, it behoueth you first to make scarifica-
tion of skinne about, and so let bloud flow out, and then you
may use it, and note that there are five sundrie kindes of
stitching incarnative.

John Yates. Which are they?

Tho. Gale. I will set them out vnto you. The first kind
is done with an euen, strong and soft, threed of silke, making
the first stitch in the midst of the wound, then the second
stitch in the middle space betwixt the first stitch and the
one end of the wound, and the third stitch shall be like the
second in the other side of the wound, and so euer betwixt
two stiches in the midst, take another vntill the sides of
the wound be aptlie and decentlie ioyned together. And
you must also take heede that your stiches be not thicke
or thinne set. For if they be too thicke, you shall (as Celsus
sayth) prouoke colour and paine, and cause inflammation,
and if they be too thinne and rare, then it cannot containe
the sides of the wound together. The second kind of incar-
native stitching is used in great wounds of the thighs and
shoulders, and is in this manner. Joyne the sides of the
woundes together, and marke how many stiches it requi-
reth, and for euerie stitch you must prouide a needle and
a threed, and put a needle in the midst of the wound, and
winde the threed round about the needle many and sun-
drie times, and the needle remaine still in the wounde vn-
till the consolidation of the same. You must in like sorte
doe with the other stiches which are to be made, accor-
ding to the quantitie of the wound. The third kinde of
incarnative stitching is done with quilles or rolles made
of

of stoupes, in the bignesse and forme of quilles being wri-
thed, and made even and smooth. And this waie of stitching
is thus: You shall drawe the sides of the wound together,
putting your needle and threed through both sides of the
wound, and againe put the needle backe againe through the
same hole, and so leaue a loupe of the threed behinde, into
which you shall put one end of the quill, then drawe straight
both endes of the wound together, and fasten them to the
other end of the quill, and cut off the threed, and let the quills
so remaine untill the wound be perfectlie healed. The
fourth kinde is done by hookes, great or little, according to
the bignesse of the wound, and the hookes must be crooked,
and bowed at both ends. You shall fasten an hooke on the
one side of the wound, and drawe the other end toward the
other side, in which you shall fasten the other hooke. This
kinde requireth no violence, but onelie serueth whereas the
wound will easilie come together. The fift and last kinde
of stitching is with clothes thre cornered, being of such
bignesse, as may suffice for the hurt member. Which kind
of stitching is verie conuenient in those woundes, where-
as we will not haue the cicatrice to be seene, as in the face,
and these clothes must be wet in some viscos and glut-
inous liniment, and laie them to on either side of the wound,
and when they be dried, you shall make your stitches in the
cloth conuenientlie and aptlie, and so ioyne the sides of the
wound together, and these be the five kindes of incarnatiue
stitching.

John Yates. There be two things touching these stitch-
ings that I must require of you. The one is, what manner
a needle we must vse in our stitching; the other, with what
things we shall make our liniment, which must be exten-
ded on the linnen cloth vled in the fift kinde of incarnatiue
stitching.

John Field. The Needle must also be long and
small, being thre square, the eye hollowed in, that
the threde maye the easilier followe. To the which
Needle there must be likewise a Quill made hollowe,
called in Latine Canula, this serueth to holde the
D.iiii. sides

sides of the wound together steadfastlie while you make your stitching. As touching the matter whereof you shall make your liniment, it consisteth on Mirre, Frankensence, Sanguinis draconis, Mastike, Sarcocolle, Pitch, Wildust, all these, or part of them, must be mixed with the white of an egge, and so extended on the clothes.

John Yates. This I vnderstand right well, wherefore procede to the second kinde of stitching, which you call compressiue.

Tho. Gale. That stitching which we call compressiue vsed to stae and stanch great fluxe of bloud, is in this sort: Fold in the sides of the wounds, as the skinners vse in sewing their skinnes, and stitch them, ouercasting them. And we vse this also in wounds of the intestines, and panicles wounded. But this kind of stitching, in my opinion, is not so good and safe, for that if one stitch breake, all the other are loosened.

John Yates. Then I praie you procede to the third kind of stitching, called Reseruatiue.

John Field. This last kinde serueth onelie to keepe the sides of the wound together vntill it be made whole, and is in like forme as other common stitchings, sauing y the sides are not so straight drawen together, as in other wounds, & is right good in woundes ruptured and torne, and whereas things are afterward to bee taken out, and when as the wound must be purged, and this shall suffice touching the knowledge of stitching. There bee other inuentions and waies of stitching, which are to be learned rather by seeing the cunning Chirurgion worke, than by many lines set out in booke.

John Yates. Then I praie you procede to liniments and tents.

John Field. Tents & liniments to be profitable, no man scene in Chirurgerie do obteth, but at this present it shall be sufficient to shew when, how, & to what ends, they be vsed: & also of what matter they are made, & of their diuers forms.

John Yates. I praie you vnto how many ends doeth it serue?

John

John Fielde. Unto, viz. sundry uses.

John Yates. Which are they?

John Fielde. First we vse tentes to enlarge & ampliate a wound, or to mundifie the same, and whereas mattier and sanies, is to be taken out of deepe wounds. Secondly, we are constrained to vse tentes in profound and deepe wounds, which of necessitie require a newe regendzing of flesh.

Thirdly, in wounds which thzough the ayze are altered, & therefore are made filthie and sanious, and require mundification. Fourthly, we must vse them in confused wounds.

Fiftly, the vse of them is right profitable in woundes, that hath inflammation, or hath any tumoz against nature ioyned with them.

Sixtly, in woundes which come of biting: for such woundes are not speedely to bee conglutinated, but rather kept open: for that (if we beleue Cornelius Celsus) all biting dothe participate of venome, and therefore that must be drawen out, and not kept in thzough to hastie iccatrizing of the wound. Seuenthly, we occupie tentes & linements in those woundes, in curing of which we must handle the bones. Last of all, we vse tents in old wounds which are digenerated into y nature of vlcers.

John Yates. Seeing you haue shewed to what endes tents serue: I pray you set out the mattier and substance whereof they doe consist.

Tho. Gale. For the better vnderstanding hereof, it beho-
meth to consider, for what cause & intention they are made: for sometime they be vled to cleanse and purge the wound, & then they are made of soft and olde linnin cloth, sometime they are vled to keepe the wound open and wyde, and then they are made of stupeas cleane and well kempte, or else of cotton wolle. And for that cause also, there are tentes made of siluer or copper, being made hollow, and put into the wound. As for examples sake, in woundes of the nose, wherby he may both aptly draw in the ayer, and also the wound be purged of such filthinelle as groweth.

Furthermoze, when as we will ampliate and enlarge a wound, than we make tentes of sponges, or the roote of the gentian, for these sucking the moisture in the wound doe

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An Institution

therewith swell and waere bigger, whereby the wound is enlarged. And as touching the forme and figure of tentes, they are made long, short, bygge, and little, according as necessitie require, but yet this is generall, that all tentes be made bygge at the one ende, & lesser euer toward the other: lesse, that they might slippe into deepe woundes. And these tentes are sometime dipped in vnguents, & sometime put into the wound or vlcer dnye, according as occasion is offered, and this shall suffice, touching tentes, their vse, forme, and mattier on which they are made.

John Yates. **Boulsters** followeth next.

John Field. **Boulsters** called *puluilli*, or *plumacioli*, are much profitable and necessarie in woundes: for they compresse the member denided, and nourish, and conserue naturall heate, and keep the member from the waight and paine of the rollers: and in the olde time they vsed to solwe betwixt two cleane and white linnen clothes, feathers, and so made bolsters, which they vsed as is aforesaide. But for bicause they were compelled estones, and often to alter the bolsters, being lweried throught continuall making newe, they inuēted to make bolsters of steyes, made with flaxe, sometime they make these bolsters of woll or cotton finely carded, and now it is in common vse to make bolsters of fine and soft linnen clothes thryse or more times doubled, as necessitie requireth. Also many doe make and ordaine bolsters of sponges: of these bolsters some be applyed wette, and some be vsed dnye, & there be for the more part. vi. kinds of bolsters.

John Yates. **Which are they?**

Tho. Gale. **Retentive**, **conglutinative**, **expulsive**, **restric-
tive**, **cōfortative**, & **conseruative**. These take their names of their vse & office, for those bolsters which be retentive, serue in woundes, for to stanch blood, being but little & smal, & laied on a stuye or splegiant, mixed with the white of an Egge, and some restricative medicine. The conglutinative bolster serueth to kepe y sides of great woundes to gether, after that they be stitched, and the forme of these bolsters according to Auicen, is thre cornered, & so adapted to the mēber y one of the

the corners of either bolster lye on the wound. The expul-
sive bolster is ordained to put out matter or sanies in ul-
cers & wounds, which be deep & hollow, & these be made either
of linnen cloth, or else of sponges. The restrictive bolster is
made of linnen clothes doubled ii. or iii. folde, dipt in wine
or vinegar, or other decoction, & so wung out & laide on ei-
ther side the wounded part : & this doth restraine the flux of
humours flowing to the part, & kepeth back inflammation &
other accidents, which might infect & greue the weak member,
& the vse of these bolsters is right profitable in fractured bo-
nes or luxations. The confortative bolsters serue to confort &
strengthen the weak member, & are diuersly made, some of
fine linnen clothes, in which is sewed fethers, & this is made
like a quilt, & serueth for the armes, or legges, to keepe them
warmed, & nourish natural heate. There be also some made of
tow, which are accustomedly vsed in wounds of the head.
Other are made of sponges, dipped in some hot liqore, or
oyle, & after wung out and applied to the joints, and colde
parts.

The conseruative bolster serueth in luxations, to keepe the
member reduced to his natural forme, in the same state, as
the shoulder bone being reduced to his wonted seate, we lay
a bolster vnder the arme, or as they comenly say, in y^e arme
pit, & these be the most notable & vsuall kindes of bolsters
vsed in the art of Chirurgerie.

John Yates. If you in like maner make plaine vnto me
the maner of ligature and rollings, I shall think my selfe
satisfied for this present.

John Fielde. We will fulfill your request, and first
following Auicenn in his fourth Fen, of his fourth booke, we
make three sundry sortes of ligature or rolling, that is to
say, incarnative, expulsive, and retentive : the incarnative
or rather conglutinate, is vsed in grene wounds, or frac-
tures.

And the roller must be rolled vp on both ends of y^e same,
& the beginning of y^e ligature must be on the contrary or op-
posite part of y^e wounded place, winding the one part of the
roller, towarde the higher part of the member, the other
toward

forward the lower part. The breadth of the roller must be such, as may couer all the wound, besides some parts of the sound flesh. The roller must be drawen straiter vppon the wound, then in the other partes: but yet not so strait, as may cause dolour or paine, inflammation, & fluxe of humors, and let the endes of y^e roller be stitched and sewed, and not tyed on a knot.

The second sort of rolling, called expulsive, is properly v^sed in olde and hollow vlcers: & this doth expell the matter, and filthinesse gathered in the bottome of the vlc^r vnto the mouth and orifice of the same. This is with a roller, beginning at the lower part of the affected member, and so making the ligature straight, and so procede to the vpper part of the member, making your rolling lesser, vntill you come to the orifice of the vlc^r.

John Yates. We not offended I pray you, though I seme to breake of your talke, and befoze you procede further, let me vnderstand what you call the higher part of a member.

John Field. I call (with Galen) the higher part of a member, that which is most nere the liuer or heart.

Io. Yates. When I pray you returne to your former talke.

John Field. There ye remaineth to speake of the third kinde of ligature, which is called Retentive, and this onely doth serue to keepe on medicines on the wound, vlc^r, or part affected, and in Apostumes, and other ill dispositions, and this is done with one onelie roller, beginning first on the part affected, and so procede according to vse, fastning the roller with stitching, and this kinde of ligature must be done softlie, gentlie, not too hard or straight, but without dolour or paine, and must be loosed when necessitie doth require, and if that it fortuneth the roller to cleane fast to the medecine or member, take it not awaie with violence, but wet it so long with Wine made warme, vntill it will of the one accord lose, and be taken awaie without grieve or paine, and note that your roller be made of fine and soft linnen clothes, not too much wo^{ne}, and vnable to holde, let it be also of that length and breadth that the part affected doth require, as for example: Rollers for the thigh must be
fine

five fingers in latitude, for the arme three fingers brode, for the finger the roller being a finger broade, shall suffice. As touching the longitude or length of y^e roller, it is to be made as necessitie require, and occasion is offered.

Tho. Gale. Well then, seeing that we haue ended this talke of stitching, tentes, bouldsters, stupes, and rollinges, we will here conclude for this present: for behold the Sunne b^eaweth farre west, and the time will scarce suffice for our iourney homeward, and what you here doe want, you shall finde in other of my workes, but in our going toward the citie, let me heare what you haue bozne away of this daies talke.

John Yates. I will repete in b^riefe wordes so much as I can remember.

1 First when as I met you in the morning, being in talke of Chirurgerie, you shewed me what it was, & gaue me thereof diuers definitions.

2 Secondly, you proued it to be the third part Therapeutike, and shewed the antiquitie and worthinesse of the same, with certaine noble princes and captaines, who exercised Chirurgerie.

3 Then you saide that Chirurgerie did consist of two parts, the one being called y^e theozike, the other the practise.

4 After that you declared what was subiectum Chirurgiæ, the thing on which the Chirurgion both exercise his arte, and also what was the ende of Chirurgerie.

5 Further you set out what maner of parson he should be that must learne the arte of Chirurgerie, and what condicions are in him required, and what the cause was that there is so many rude Emperikes and vnskilfull professors of Chirurgerie.

6 Consequently, you did make mencion of the chiefe & most necessary instrumētts, wherewith a Chirurgion ought to be furnished, both metalline and medicinall, with their proper office and vse.

7 Then you set out the methode and way to be obserued in learning the art of Chirurgerie and of the right vse

An Institution

of instruments both mettalline and medicinall.

8 Next followeth such sicknesse as fall vnder the hædes of the Chirurgian, that is to saye, tumoys against nature, wounds, vlcers, fractures, and lurations, with the definiti- ons diuisions, differences, and diuers names of euerye of them.

9 After these things finished, you set out certaine kinds of solation of continuitie, taken out of Galen.

10 Also you set out the operations of the Chirurgion, which are required in curing the sozenamed griefes, & what things are herein to be obserued or fled.

11 Finally, you set out the art and maner of stitching, tentes, plumactes, stupes, bouldsters, and rollings, with their differences, substance, figure, vse and comoditie, these seeme to be the argumentes of this dayes talke, except I be de- ceined.

Tho. Gale. They be so in dæde, and now beholde, we be come to the Citie. Wherefore we will now leaue of talke here, and you both shall this night take part of such chære, as God hath sent mee, and let vs recreate our spirits, and be merrie, I pray you.

Iohn Field. I thank you heartely sir, and I reioyce that my brother Yates hath so firme and perfect a memozie, God send more such to follow Chirurgerie.

Iohn Yates. I thanke you both, for the great benefit I haue receued at your hands, and God graunt me to spende many dayes in this sort.

AMEN.



An Epistle
AN ENCHIRIDION
of Chirurgerie, conteining
the exact and perfect cure of wounds,

Fractures, and dislocations: newly compiled and
published by Thomas Gale, Maister in
CHIRVRGERIE.

Richard Ferris Sergeant

Chirurgion vnto the Queenes most excellent

Maiestie, vnto his louing friend Maister

Gale, sendeth greting.

TWO things there be at this present which moueth me
to addresse my letters to you maister Gale, of which
the one is the auncient and famous arte of Chirurgie,
which was in times past not an art of it selfe, but
one portion of the curatiue part of Physicke, called Therapu-
tice: the other, is my natiue countrie. These two by your la-
bours and paines, I trust shal receue no small profit & gaine,
and these make me to write my letters gratulatory vnto you.
First that the art of Chirurgerie, who being now so decayed,
whote fame so obscured, hir beautie eclipsed, and vtilitie of it
diminished, shal by you be somewhat brought to hir wonted &
pristiniate state. For it is in far worse case now in this our fu-
rious and raging season (in which good artes are contemned,
or else little esteemed & had in price) then it was in the time
of Mantuan the Poet, who exclaimeth in this wise.

Fama quidem manet, vtilitas antiqua recessit.

The Poet speaketh of Physicke generally, waying the ex-
cellencie of it, & the great vtilitie that hath come to mankind
by it in the olde time, as the workes and volumes of the Greke

wry-

An Epistle.

writers do testifie and beare witnesse:and conferring further their testimonies with the poore fruits of it that did spring in his time;as one lamenting the decay of so noble a Science,and great gift of God to mankinde,sayd in effect.

Hir noble fame yet still remaine,
But few doth health by hir attaine.

He speaketh it in the way of comparision, that there did not so many by the benefit of Phisicke receiue their health as did in the olde tyme . But I leaue Phisicke, and will speake of Chirurgerie,both our professions . Surely,I dare bouldly affirme, that if Mantuan were now liuing, and did behold the state of Chirurgerie, he would not say that her fame did yet remaine,but rather that neither fame nor yet great vse remained : I had almost sayde that it was knowen but onely by name.And what be the causes that she is brought to this miserable estate?If I shal say that which I know,ther be two principal enimies. The one is the Chirurgiō himselfe,who neither knoweth nor yet laboureth to learne his arte,but being inflamed with the loue of turpe lucrum,rudely and blindly exerciseth his arte.The other enimie is the patiēt, who hath nede of Chirurgeries ayde.For he will haue in lyke estimation, a cobler, a loyner, a Minstraile, a Woman, yea, a Horse-leach,that hee will an expert Chirurgian, yea,and reward them as well, if it be not better . The remedies for one of these mischiefes, you haue, I hope in time provided. I meane in setting out your Enchiridion . For there shall those that in dede are licensed to exercise Chirurgerie, finde no small portion of this arte, compendiously and faithfully gathered together . Wherefore leauing other their authors in which many errours are hidden, I doe exhort them that both for the fame of Chirurgerie, which they ought to their vttermost to maintaine : and also for their owne gain and profit,they wil not onely reade this Enchiridion:but read & read it againe,not leauing.vntil they be made welacquainted with the same.And if any places do remaine obscure and darke,they yet haue you the authour to resort vnto,who wil

as gladlie, I am sure, open the meaning of them, as hee hath willinglie for their gaine and profite compiled the same. As for the other enimie, I meane the sicke patients, it dooth not much force, for they are enimies chieffie to themselves, when as they fall into the handes of such rude and buffardlie clouters. And although the patients beeing maimed and brought in perill of death by such, doo exclaime against Chirurgerie & Chirurgions, yet if the Chirurgions themselves studie to be learned, and excell such rude Emperikes, the slander shall returne to the authors therof againe. The second cause of my writing, was for my natieue Countries sake, that like as you haue laboured from the time that you were in my gouernance and teaching, to profit in the same, and haue now shewed an euident signe and token thereof in this your Enchiridion: so you will not cease to continue in these your good enterprises, and your Countrie shall reward you with honest report and perpetuall fame. Thus I cease to trouble you further, loo-

king shortlie for the publishing of this and other your

workes. At my house in Paddington the second

of Iulie. 1563.



E.

Chirur-

Chirurgerie, whose perfect light
all other Realmes doe know,
Whose learned men with diligence,
dooth make it shine and show.

In our coast hath not yet appeared,
saue in most obscure wise,
Thorough duskie cloudes of ignorance,
that science doth despise.

But mangre now the mallice great,
of Momus and his sect,
A most cleere Gale doth blow awaie
those cloudes, and them detect.

As after rude and cloudie aire,
the welkine hiecinthe bliew,
Is sometime scene, when windes most drie,
haue chaunged so the hiew.

Therefore to this excellent Gale,
see that you thankfullie,
Giue condigne praise, and praie that he
may moe such blasts applie.

That the armade of learned ships
belonging to this art,
May waigh the ankers, spread the sailes,
and from rough seas depart

While this Gale blowes, that some of them,
ariue may at our porte,
That to the flecte of knowledge once,
young learners may resort.

Purchasing there with diligence
science that will remaine :
Leauing a part vile ignorance
the mother of disdaine.

John Hall Chirurgion.

¶ **THOMAS GALE CHIRVRGION,**
vnto the young men of his Companie, students in the noble
art of Chirurgerie, wisheth the grace of God, perfect
knowledge in their Art, and most happie &
prosperous successe in the same.



When as I had for your sakes (dære brethren)
finished my booke, intituled, The Institution
of a Chirurgion, and thought to haue proceed
ed no further touching the practike parte,
but minding to send you to Guido de Cau-
liaco, Brunus, Lanfranke, Vigo, or some other
of our authoꝝ in Chirurgerie, which doe thereof intreate: I
could finde no one that might aunswere my desire, for ey-
ther they writ in the tongue which the most of you vnder-
stand not, either vse they corrupt and barbarous names of
sicknesse and medicines, or they be too tedious & long, or else
too concise and brieue. Furthermore, they welnigh all are so
full of errours, that they are onelic for the learned to reade,
who can discerne betwixt truth and falsenesse. Wherefore
knowing your desire to learne, and seeing the want of such
Authoꝝ as you should profit by, I lamenting the ease, and
tendering your wealth, haue taken the pains to compile you
this brieue Treatise, called an Enchiridion, in which you
shall finde the methode and waie how to cure all woundes
both in similer and instrumentall parts. Also how to vnite
and heale fractured members, and to reduce & repose againe
into their wonted and naturall place, such bones as be dislo-
cated. Diuerse secret and perfect experiments I haue made
open vnto you, wherefore be bolde to worke after the doc-
trine set out in this Booke, and take these my labours as a
pledge of my good will toward you all, and loue mee
still as you haue begun. At my house in
London the second of August.

1563.

E.ij. The

The first booke of the En-

chiridion of Chirurgerie, containing the exact and perfect cure of wounds made in the similar parts. By Thomas Gale.

The first Booke.



Inasmuch as in this present treatise (which I do compile for the instruction of those that professe Chirurgerie) I do purpose to intreat orderlie of wounds, fractures, and dislocations: I thinke good first of all to set out what a wound is, & how many differences there be of wounds. Howbeit my principall scope tendeth rather to teach the practise than the Theorike at this present. Therfore a wound is named a solution of continuitie, newlie made in the softer parts of the bodie, without putrefaction, corruption, or matter. For if anie matter, putrefaction, or corruption, followeth, then it is no more called a wound, but an vlcere. Of wounds I do make two differences, for eyther it happeneth in the similar parts, as in flesh, arterie, veine, nerue, bone, &c. or else in organike or instrumentall parts. Of these two sortes of wounds we will now seuerally intreate. And for because the least and smallest wounds require least labour, diligence, and cunning, and that the student must in most easiest things be first exercised and trained up, I will shew you brieflie the cure of a simple & small wound, where the skin onely is divided or cut. You shall aptlie ioine the lips or sides of the wound together so euen as possible you can, then make a stufe with Towee and the white of an egge, mixed with a little salt, and apply it to the wound, then roll and binde it according to arte, and this is sufficient in such kind of wounds. You must also command the patient that he exercise not the wounded member, least that he causeth accidents to fall to the wound, as inflammation, fluxe of humors, dolour and paine, &c.

The

The cure of great and deepe wounds, and of diuerse kinde
of Stitching. Chap. 2.

If the wound be great in the flesh, and yet without accidents, you shall begin your cure in the Chapter before, that is, by comprissing and ioyning the sides of the wound together, and then rolling and binding it. But if the wound be bigge, wide, or else ouerthwart the member, so that rolling and binding are not sufficient, then you are compelled to vse stitching, of which there be diuerse sortes, and I will set out those which are most in vse. But or you goe about the stitching of the wound, giue diligent heede that it be mundified and made cleane, that there remaine not in it either anie vncleannesse, as haire, dust, oyle, or such lyke, which may hinder the adglutination of y^e wound. You must for your stitching prepare a three square needle made hollowe in the eie, that the threed may the easier follow, and let your threed be euen, without knots, well twined and waxed. Then your stitching shall be in this sort. Make you first stich in the middelt of the wound, then a finger breadth from y^e make another on both sides of y^e middle stich, & so leauing the space of a finger breadth, make so many stiches as the wound requireth. And take this for a generall rule, that you neuer begin your stitching at the end of a wound, because through that occasion the wound might be drawen asunder, and the member lose his beautie, and sometime part of his office, and beginning your stiches in the middelt, this followeth of necessitie that your stiches shall be gooder, if there be more or lesse than twaine. And if the wound be deepe & ouerthwart the member, then you must make your stiches deeper, and that for two causes, the one, for that it should not breake out againe, the other, y^e the wound might haue lesse matter, and better take consolidation. And when you haue thus stiched y^e wound, you must ouercast y^e threed twice or thrice or you knit your knot, otherwise it will break out or you can knit your knot, y^e proufe of which I haue scene among the vnlearned Chirurgions. And when your wound is thus stiched, then take Tow & make a Ruse with

The first Booke of

the white of an egge, and this powder following, and lay it on the wound, and though it hath not bene vsed before this time, yet it is both better and moze conuenient than that which is mentioned in the last Chapter, and this is the first kinde of stitching.

The description of the powder. Rec. Olibani, p.ij . Sanguis draconis, p.j . Calcis ex ouorum tellis, p.iiij . Ex his fiat puluis subtiliss. secundum artem.

The second kinde of stitching, is to sowe ouer the hand, as the skimmers doe, which is vsed in wounds of the intestines, or whereas Siphach is sowed to Mirach . The third kinde is to put the needle through both y lips of the wound, letting it so still to remaine, and wind the threed sixe or seuen times about the needle, and this is vsed in wide & large woundes . The fourth manner of stitching is, when as a veine or arterie is cut, and we vse to stae the flure of bloud, especiallie whē as Vene iugularis is cut. Then we thrust y needle through that veine or arterie, and then knit the same with the threed, then drawe out the needle, and let a portion of the threed hang out so long, vntill it falleth awaie . The fift sort of stitching, is vsed in woundes of the face, or delicate and tender bodies which are not able to sustaine the paine of stitching with the needle . And the stitching is in this sort. Take little peeces of linnen cloth thre square and spread them on this vnguent following, and laye on euerie side of the wounde the peeces of cloth euerie one from other an inch, and when as the clothes are dried well, then stitch them, and drawe them together, and vse the wound in all other points as is aforesayd.

The making of the vnguent. Rec. Dragaganti, Sang. draconis, Olibani, Mastiches, Sarcocollæ, ana, j. dragme, Pulueris volatilis molaris, iiij. dragmes, Albuminis ouorum, q. s. ad incorporandum.

Of wounds in veines and arteries. Chap. 3.

When as it happeneth that the veines are cut & wounded, you must diligentlie marke whether they be Venæ Capillaris (that is to saie) small veines like haire, or else ante

anie of the greater veines. If they be the smal veines, it shal suffice to scitch the wound, & vse the pouder desiccative mentioned in the Chapter going before, with talw and the white of an egge. But if anie of the great veines be wounded, the cure aforesaid is not sufficient. Wherefore you may attempt to stay the fluxe of blood with binning the contrarie side to the place wounded, or with letting of blood in another place, whereby there is made diuersion of the fluxe. Also with frictions and rubbing the contrarie parts. If these suffice not, then you must applic caustike powders, as Arsenicum sublimatum, Vitriall burnt, vnslaked lime, or such like, or else make cauterisation with an yron, or scitch the end of the veine, and lay some desiccative pouder on it, and so dress the wound, letting it so remaine foure daies. And if there be anie asker, you must applie to it the white of an egge, and oyle of Roses, well beaten together. And the cure that is heere spoken of veines, is also to be vnderstood of arteries, and the waie to know whether a veine or arterie is wounded, is by the issuing out of the blood. For in an arterie cut, the blood cometh leaping and springing out with some stay, according to the dilatation & compression of the arterie. A pouder desiccatiue, Rec. Ohbani, ʒ. ij. Aloes hepaticæ, ʒ. j. Pilorum leporis minutim confiso, Albuminis ouorum ad incorporandum. Lanfranke giueth great praise to this medicine, and maketh mention of a child three yeres old, bearing a knife in his hand, fell on it, and wounded his throte, so that through fluxe of blood the pulse began to cease, and the childes sight to decay. Lanfranke comming by, layd his finger on the mouth of the wound to stay the fluxe of blood, then he tempered the pouder with the white of an egge, and laide it to the wound, letting it so remaine foure daies, and when he would haue taken it away, it was so drie, and cleaued so fast to, that it might not be remoued without paine, wherefore he applied the white of an egge & oyle of Roses beaten together to the place vntil the next daie, & the wound was found perfectly healed, to the great admiration of the people which did behold it. Another desiccative pouder. Rec. Calcis viuæ, Sang. draconis, Aloes hepaticæ, Fiat puluis, ana. ʒ. ʒ.

B. iiii.

But

The first Booke of

But if you will haue another, which drieth and restraineth more, vse this following. Rec. Gallarū, Sanguis draconis, Boli armeni, Thuris, Aloes hepaticæ, Mastiches, ana. ij. dragmes, Pilorum leporis, iij. dragmes, fiat puluis crassus. Rogerius and Iemerius vsed another powder, which is not onelie excellent in staying the fluxe of blood, but also doth ericate and drie, whose composition is in this manner following. Rec. Colophonij. vj. ounces, Boli armeni. iij. ounces. Mastiches, Sang. draconis, Olibani, ana. j. ounce. Radicis consolide maioris, Rosatum persicarum, ana. ʒ. j. Fiat ex hijs omnibus puluis. Vfus vt supra. Brunswicke remembreth a stone which hee calleth a Bloud-stone, (but yet not that which are named Iaspis, and Hematites) and it is in colour pale, whitish, with small redde veines, and is found in Spaine, whose Powder hee preferreth before all other thinges in staying the fluxe of blood in woundes, veines, and arteries.

Of the Wounds in Nerues or Sinnowes. Chap. 4.

If a wound it maye happen the Nerue to bee diuided in length, and sometime ouerthwart, which is verie perilous. Also sometime the Nerue is pricked with a needle, bodkin, alle, thorne, or such like. Vnto all this, to cease the dolour and paine of so sensible a parte, you shall vse Oyle of Roses, made with Oleum omphacinum, somewhat warmer than the patient can well suffer. Also you may make a good digestiue of fine Turpentine well washed in the waters of Plantaine or Hypericon, and applie it to the wound. And if these with often application ceaseeth not the dolour and paine, then take Olei Rosacei, two ounces, Boli armeni, two drammes, and Opij a little, mixe these together, and applie it warme to the wound. And when the paine is ceased, and the wound draweth to maturation, then you maye heale it with the drinke & plaister vsed in Greene woundes, which you shall finde in the Antidotarie. You shall also not onelie in wounded nerues, but also in all other woundes vse Unguentum de vermibus, whose composition is in this manner.

Rec.

R. Centaurij minoris, Cynoglossi, Cōsolidæ minoris, Cōsolidæ mediæ, Ana. m. i. Olei omphacini, lib. i. Lumbricorum terest. Vini albi, ana. halfe a pound. Stampe all these together, and let them stand infused seauen daies, then stampe them with that. Seui Oiuini, lib. ij. Picis, Resinæ, ana. ℥. iij. Ammoniacy, Galbani, Opoponacis in aceto soluti, ana. ℥. v. Boile all these together untill the Wine and vineger bee consumed, then straine it, and when it begins to waxe cold adde to it, Thuris, Mastiches, Sarcacollæ, ana. ℥. iij. Croci, ℥. ij. These being made in fine powder, in the putting them in, sturre them well with a splatter or flise that they grow not into clods and lumps. Also to defend the wound of sinnowes, yea, and all other wounds from accidents which do commonlie chaunce, all excellent Chirurgions vse to haue in readinesse this defensiu folloving.

Rec. Olei rosarum, ij. ounces, Boli armeni, Terræ Sigillatæ, Aceti, ana. j. ounce. Camphoræ, j. dragme. Solani, Semperuini, ana. m. j. Make of all these in a morter a perfect unguent. And if the wound be moist, and hath too much superfluous matter, whereby it cannot come to adglutination and cicatrization. Then vse this medicine next ensuing. R. Mellis rosacei. ounces. vj. Farinæ Hordeacæ, ounces. ij. Temper these together, and boile them, but suffer them not to burne, then put to it fine Turpentine (washed in the water of Hypericon) two ounces, mixe them and vse it to the wound.

A defensiu.

Of wounds in which are fixed thornes, splints of wood, arrow heads, Gunshot, or such like. Chap. v.

When as in woundes there happeneth to be fixed thornes, splints of woode, arrowe heades, gunshot, or such other like, & the orifice of the wound is so narrow, that with instrument it cannot be take out, you must of necessitie labour to enlarge y wound, which you may do two sundrie waies. The one is with tentes, as of the rokes of Cencian, pith of Elder, or a peece of a Spunge; the other is to make incision with a paire of

C. b.

cissors,

The first Booke of

risers or with Theres. There be also when as the wound is enlarged blurs and proper instruments to take out with such things as are there infused, as Tonges, or nippers, and terribilis.

Also you shall know in deepe wounds what part is hurt, by these signes following. As the braine being wounded he shall voide scomme and some at the mouth. If the heart be wounded, there issueth out bloud blacke in colour. Also, if the lungs be wounded, the bloud is like a scomme. But if the stomacke be perced, the meate indigested cometh out. In like manner the intestines being wounded, the odour issueth. Furthermore, the vrine floweth out in wounds of the bladder: and so by that which is contained in the member, you shall coniecture the wounded part. Now as touching the taking out of such things as be fired in the wounded member, you may procede principally three sundry waies. First you may vse such instruments before set out as shall seme most necessarie. Secondly, if the thing fired be forked as a broad arrow head or such lyke, and be perced through the greater part of the member: then it shalbe much better to thrust it through the member then to take it out at the orifice of the wound.

Last of all, if these two wayes will not serue, because of the wounded place, then as much as you can make the wound wider by tents or incision, and laye maturatives to it certaine dayes, and then that which is contained in the wound, will with lesse difficultie come forth. You shall commaunde the pacient to lay on the wounded side, because the drinke which I vse in such wounds may the more redely come to the wounded part. The composition of this drinke you shall finde in the Antidotarie. Also you may vse this plaister following to y wound which is right good in extraction of such things as are fired on wounds.

The emplaster. Rec. Apostolicō descrip. Nicholai. iiii. vnces. Magnetis orientalis. ij. vnces. Polipodij. Dictami albi, ana. halfe an ounce. Pinguedinis leporinæ. ij. vnces. Olei canabis. i. vnce. Terebenthinæ. halfe an vnce.

Of all these make an emplaster. Also there is another
come

composition of meruailous vertue, in drawing out rotten bones, thornes, and other lyke things.

Rec. Nucleorum palmularum, Stiracis rubei, Salis ammoniaci, Aristolochiæ longæ, Rad. Cucumer. Asinini. Teribinchinæ. Ana. v. drams. Piperis Albi, Piperis Nigri, Armoniaci, Amomi, Xylobalsami. Thuris masculi, Colophonij. Ana. ij. dragmes and a halfe. Fecum olei liliacei. q. s. Ceræ iiiij. dragmes, fiat vnguentum.

But in arrow heads or shot poisoned the medicines rehearsed are not sufficiēt. Wherefore you must giue the patient some antidotum or Alexipharmacum, against venom both inwardly & outwardly, inwardly you shall giue him euery day this potion.

Rec. Vini cretici, Sublimatæ rutæ. Ana. vnces. iij. Tormētille, Dictami. Ana. ij. dragmes. Theriacæ opt. i. dragme. Bulliant ad consumptionem tertie partis.

Outwarly into the wound you shal put oyle of violets warme, which oyle must be made of Line seede oyle. You may also wet your tent in the same oyle and also myre it with your other medicines that you apply to the wound.

Of contusid, broysid, or crushed, wounds. Cap. vi.

In contusid wounds, the methode curatiue differeth frō that which hetherto is mencioned. For in these wounds first you shall apply maturatiues, whereby that which is brused & seperated from the vnitie of the part, may be turned to mattier (they call it in latine sanies vel pus) & when it cometh to maturation, then you must vse mūdificatiues to mūdifie the wound, vntil it be cleane & voide of mattier. The your next intētion is to ingēder flesh, which you must do with incarnatiue medicines, & ever be diligēt to defend your contusid member from accidēts, with oyle of Roses warme applyed to the same. As touching maturatiues, mūdificatiues, & incarnatiues, you shal finde the in my Antidotarie, and in diuers parts of this worke.

Of depe & hidden wounds, which cannot be wel perceiued. Cap. vii.

In this kinde of woundes the cure is done thoo sundrie waies. First, if the place may suffer it without hurt of veines, arteries, and nerues, is to delate the wound with tents of Gentian, or of a Sponge, and after make it open and large with incision. The other is, if the first waie cannot be done without danger, to put into the wounde a probe or ware candle, untill you come to the end of the wound, and make there an issue, that by this waie the matter in the wound may be cleansed with some mundificatiue lotion conueied into the wound by a siring. Let your rolling also be such, y it be loose at the orifice of your wound, for otherwise you shall keepe the matter still in y wound. Neither shall you in mundifieng the wound thrust out the matter, for so doing you shall thrust out the indigest matter in colour of blood, and hinder much the cure of the wound. As Brunswike maketh mention of a certaine Barber who had no knowledge in Chirurgerie, & yet would take vpon him to practise. This Barber (hauing a patient wounded in the arme) did euerie daie thrust out so much blood, and brought such accidents to the part, that if Brunswike had not fortunatlie come, the Barbers patient hadde lost his arme. Such is the fruits of blinde Emperiks. You shall also about the wound applie some defensiu, and on the wound some mundificatiue, and make your intections with a siring, untill the water come forth of the same colour it was put in. The water vsed for intections is made in this manner.

Rec. Mellis rosacei. vj. ounces, Rosarum rubearum, Florum camomilli, ana. iij. ounces, Mastiches, Ireos, ana. j. ounce, Thuris, halfe an ounce, Myrrha. j. dragme, Vini albi. ij. pound, Aquarum plantaginis vtriusque, Rosarum, Caprifolij, Foliorum quercus, ana, a pound.

Another more vehement. Rec. Aluminis. j. ounce, Balau-
stij, Nucum cupressi, Orobi, ana. j. dragme. A drying water.
Rec. Consolidæ maioris. viij. ounces, Peucedani, iij. ounces, Al-
luminis. 3. ij. Aquæ Fabrilis per filtrum destillatæ. iij. pound.
Boile all vnto the consumption of the third part.

A Mundicative.

Rec.

Rec. Vnguenti Egyptiaci, ij. vnces, Aluminis, j. vnce, Olibani, halfe an vnce, Myrrhæ, j. dragme, Vini rubei, two pound, bulliant pulliant.

Of Wounds in the bones. Chap. 8.

THE solution of continuitie in the bone, is in diuerse sundrie wise, as fractures, splents, caries, & by wound, of which last we wil onelie in this Chap. make mention. If the bone wounded doth hang to the pannicle which inuested and couereth the bone, then doe what you can to cause it to ioyne. But if this pannicle be also cut, then will not the wound be filled with flesh, except the peeces diuided be taken away. And to the wounded bone you shall vse Vnguentum aureum ex Mesues præscripto. After you must applie mundificatiues and consoladatiues set out in the Antidotarie, and see that you vse in this wound apt ligature, and that it be open vpon the wound, that you maye daillie applie medicines to the place without loosing of the roller. Furthermore, you must lay about the wound some defensiatiue, whereby the part shall bee preserved from diuerse and sundrie accidents which might fall to the wound. The Chirurgion must also haue regard that the Patient keepe a moderate diet, & that he be soluble in bodie. Which if it cannot be by nature, then procure it may be done by arte, as by Purgation, Clister, or suppositoie. And in all other things the cure of this wound differeth not from the cure of other wounds.

Of a new kinde of curing greene and fresh wounds with balme. Chap. 9.

THe healing of greene wounds by balme artificiall is in this wise. Close the wound, & stitch it, make it cleane with a drie sponge, & put of the balme into the wound verie hot, and dyesse it twice euerie daie. And here you must note that this balme taketh not like effect in all greene wounds. For the cure differeth according to the Countrie, completion,

The second booke of

complection of the partie and place that is wounded. For if the country be hot, the patient cholerike, and the wound in the head, the baulme taketh not lyke effect, nor is to be mingled as before is saide. For the contrary being hotte, and the patient hotte, the wound cannot be cured with Balme, which is also hot. And it is a maximum in Physicke, that infirmities are taken away by their contraries. How then shall the medicines lyke in qualities to the region and complection, cure the infirmitie? Except you wil aunswere me it doth it aproprietate totius substantie, which is nothing le. What then, shall not Balme cure wounds in the fore named patients? Yes verely, and I will shew you in what maner. Stitch your wound as is before mencioned, and mundifie it with a dyve sponge, not dypt in water, & take away all the bloud about it, then take cotton and make a stuphe and dyp it in Oyle of Roses and Balme, not heate, of each equall portions, and apply it to the wound. And defend the wounds with all diligence, from accidents, with some defensine: for to cholerike persons in hotte regions, there cometh accidents speedely. The like cure shalbe in wounds where as the bone is sene. Except that you must adde to the oyle and Balme, Terebentine wel washed, and the stuphe being layde on the wound, you may further vse y emplaster which customably is occupied in green wounds. And if the region be colde, the patient slegmatike, and the part fleshie, then apply your Balme hotte, for in those there follow of course small accidents, except it be by disorder of the patient, and fault of the Chirurgion, and great wounds in these persons wil sone be cured. For this artificial balme hath in him the vertue attractive, conglutivative, & desiccative: his discription you shal finde in the Antidotarie. Also in hotte regions, cold complections, & in cold regions, cholerike persons shall soner be cured, then where both region and temperature of the patient agree in hotnesse. The like is to be understood of y time of the yere. For the cholerike person being wounded, shall soner be cured with Balme in winter, then sommer. Also the wound being dressed, there are three kinde of ligatures or rollings used as necessitie requirereth.

rest. The first maketh flesh in the wound to growe, and is called incarnatiue. The second doth expel such mattier and superfluitie as combzeth the wound, and this rolling is named expulsive. The third reteineth and kepeth the sides of the wounds together, and such medicines are applyed thereto and is called retentive. Of the in our institution of Chirurgerie, we doe make a most ample discourse. And thus briefly and compendiously we haue passed ouer the principall wounds, which may happen in the similar parts: Now time and order requireth, that with the lyke methode we intreate of wounds in the instrumentall parts.

FINIS.

The second booke of the

Enchiridion, containing the curation of wounds in the instrumentall parts: By Thomas Gale Maister in Chirurgerie.



Although it might seeme sufficient for the generall cure of woundes, to haue made mention of those which are contained in the first booke: yet seeing particuler exercise in y^e instrumentall parts is both delectable & profitable, and is as it were a master which teacheth: I will endeavour my selfe to set out particularly the cure of wounds in the instrumentall parts. And I call that an instrumentall part, which is not simple but compounded of the similar, as the head, the eye, the hand, the arme, and such like. And for bicause I wil orderly intreate of them, I doe deuide the bodie of man into iiii. parts, that is to say, into three ventricles, & that which the Anotamists doe call artus, containing the armes & legges. The first ventricle containing the animal spirits, giuing sence & motion to the whole bodie, is the head. The second comprehending the vital spirits, is frō Os furculæ vntil Diaphragma: wher y^e inferior vetricle receiuing y^e liuer, stomack, splene, kidnes, intestines, bladder, & diuers other parts doth begin, and endeth at Os pubis.

And

The second booke of

And for bicause the soule is the most noble part of man, & hath his seate in the head, I wil beginne with the wounds of the head first, and set forth such things for the preseruati- on of this so principall a part, as my poore knowledge & ex- perience will extend vnto. And here loke not y I will wast time in rehearsing of weapons wherewith the part is hurt, as diuers do. For it helpeth nothing to the cure of the wound to say he was hurt with a staffe, clubbe, sword, shotte, fall, or such like: but rather to looke to the wound it selfe, whe- ther it be a simple wound, or that it be compound: whether it be contused, or else but cut: and so following the diffe- rences set out in the first booke.

Of certaine generall precepts, necessary to
be followed in the cure of woundes
of the head. Cap. I.

Wounds in the head are diuers & sundry, some are but simple woundes, being cut without any acci- dents or hurt of Cranium, some be with cutting also of Cranium. Some be contused, and yet Cranium per- fect, other happeneth with the breaking of Cranium, some are with perishing of Dura, vel Pia mater, and losse of some substance of the braine, & others are without. But for that I would you should know whether the Cranium be fractu- red or not, I will giue you certaine proper precepts. If the contusion be great, if he fall from any high place, or haue a great stroke, if when he reteineth his bzeath, there commeth out moistnesse through the diuision or fracture of the bone, also vomiting, vertigo, bleeding at the nose or eares, the eyes red and swolne, want of spech, a sharpe feuer, and difficul- tie of making his vyne: al these shew Cranium to be frac- tured.

There is also another note to know Cranium fractured, and that is, to strike on Cranium yncke or Masticke, and if there be any fracture, then in the place there will appere blacknesse, which is a most certaine token that the Crani- um is fractured. Also in your prognosticatiō you must con- sider

sider these bylese sentences. Great breaking of Cranium is
 perillous, and the wound in the braine, or corruption of the
 Dura, vel Pia mater, is deadlie and mortall. If the blacknes
 of Dura mater when it happeneth, cannot be taken awaie
 with Mel rosaceum, it is a token of death. Also the Craniū
 or braine, wounded at such time as the Moone is at the full,
 (that is, when she is in opposition of the Sunne) it is verie
 perillous. And in curing the wound, if there be a tumour or
 swelling, & that same sodeinly vanish, it is perillous. But in
 the consolidation of Craniū, if the flesh appeareth red, it is a
 good signe. Like as if in y wound there be good digestion &
 no accidents coming to the same. And for because in curing y
 wounds of the head there is diuersitie in working, & diuerse
 opinions, I thinke it good to set out certain documētis which
 I take out of the famous Guido, whose wordes are these fol-
 lowing. First (saith he) the wounds of the head with brea-
 king of the bone haue much difference from the woundes
 of the other members, both for the nerues to Cerebalis Me-
 dullæ, so noble a part, & also for the round & spherelike figure
 & forme of the head, which hindereth vnition, & is vnapt for
 ligature & rolling. Secondly, y in great wounds of y head
 it is needful for to obserue the comon intentions mentioned
 before in the treatise of Phlebotomie & purging. That y bo-
 die be soluble, which if naturally it chaucth not, the by sup-
 positorie clister or gentle lenitiue, you must make it loose. Al-
 so the diet thin, &c. Thirdly, y in wounds of the head y haire
 be shauen, & take heed that no haire, oyle, or water, fall into
 the wound, which may let consolidation of the wound, & that
 to resist dolour both aboue & vnder, applie the white of an
 egge. And after the beginning, let things be vled as is afoze-
 said, to mundifie and incarnate. And round about y wound
 alwayes vse the vnguent with bole armoniacke and oyle
 of roses, that the dolour and dissemperance of the part bee
 allwaged, and all apostumation put back. Fourthly, as you
 haue often heard of Hyppocrates, that all coldnesse is hurt-
 full to nerues, bones, and marrowe, and also the aire dooth
 hurt & alter the principall members. And therfore in winter
 when y patient is dressed, let the windowes be close shut, & a

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 Cap. 1.

The second booke of

good fire of coales, and dresse him with a candle, and when he is dressed, put on his head a coise or cap made of a sheeps skin. Fiftly, if the wound be come to digestion, & hath matter contained in it, & it be removed away with fine lint or cottō, so softly as may be, & this in winter must be but once, & in Summer twice. Sixtly, & vpon the tents there be laide a soft sponge to sucke & draw, & receiue out the matter, that it falleth not to the braine. Seuenthly, & you haue a roll a yard long, & foure fingers broad, & that you shall roll it by within two handfuls of the end, & begin the ligature at the forehead, & extend it towards the eares opposite to y^e wound, & the other part to the eare next the wound, leauing y^e eares vncovered, and let the roller come downward to y^e first binding, & doe it so many times vntill the head be couered, &c. Eightly, take hede if there remaine anie scale of a bone, wash the wound with wine. If there be no feauer giue him this pouder following. Rec. Pinpenellæ, Betonice, Gariophilatæ, Valeriane, Osmundæ, ana, Pilosille, quantum de omnib. fiat puluis.

Last of al, that the patient lie on the side which least grieveth him, vntill there be found matter in the wound, and then he must rest on the wounded part, that y^e matter may the more readilie boide. Thus much in effect touching Guido his counsaile. Also I wish frō the first beginning of the wound, vntill such time as there is no feare of Apollumatison, that you vse some mittigatiue, as oyle of roses thre ounces, bonie, one dram, mire them together, and then you may also vse this pouder, which drieth without corrosion or pricking. Rec. Irios, j. dram, Thuris, Aristolochiæ rot, ana. ℥. ij. Corticum radicum papaueris, halfe a dram, Sarcocollæ, Sang. draconis, Mirtillorum, Nucū cupressi, ana, ℥. i. ℥. Make these in pouder. Thus much I thought good to write befoze I entered the perticular cure of organike woundes, being as guides and counsailours to be followed through this whole booke. Now will I begin and shew their methodicall cure.

Of simple wounds in the head with cutting, which happeneth without hurt of Cranium. Chap. 2.

If the wound be simple without hurt of Cranium, or losse of substance, then is the cure of it like the cure of other wounds, to stich, roll, incarnate, and cicatrise. But if the wound be with the losse of substance, then you must dip your tents and coner your plegiants with incarnatines, and cicatrise the wound with your accustomed pouders, vnguents, emplasters, and other things thereto belonging. As touching stiching in the head, because many speake against it, I affirme it to be not onelie profitable in small woundes, but also in great most necessarie, for it keepeth the parts separated together, which rolling cannot. It also causeth that the aire doth not alter the part, which where it chaunceth, it is verie hurtful. And here I except great wounds in y^e fore part of y^e head, which may not be stiched but on the side, & putting in it oile of roses, which doth both take awaie the paine of y^e nervous pannicle inuelling and couering Cranium, if the wound be so deepe, and also it maketh the bones more easie to be drawen out, and taketh awaie the sharpnesse of Mel, when with it we intend to mundifie anie inward pannicle, and defendeth from accidents.

Of wounds in the head with cutting and fracturing,
or breaking of Cranium, but not through pear-
cing. Chap. 3.

The wounds chancing in the head by cutting and fracturing of Cranium, going not through the whole substance of the same, is called Rimula. This wound either is great or small, if it be small, it shall haue the same cure mentioned in the Chapter next going before this. For in such a wound there is small generation of matter, and that engendered through his grosse substance, cannot descend in y^e cut or rift. But if the wound be great, then is it either in y^e sides of y^e head or vpper part of the head: if it be in y^e sides, it hath also y^e same cure that y^e wounds in y^e Chap. going before receiue, except that in the lower part of the wound there be put a tent wherby if any matter be retained in y^e wound, it may the easier come out: but if the wound be in the vpper

Part

part

The second booke of

part of the head, it may not be stitched, for that nature there cannot purge her selfe. If the fracture commeth to the midst of the two tables of Craniū, it is needful to take shæres called Rugines, of diuerse bignesse. And as the bone of the patient is vncovered, you shall vse the greater Rugines, the after take those that are narrower, and so at length the narrowest of all, and this shall you doe at all times in y^e midst of the two Tables. Thus shall you speedelie cure this wound with drying medicines and tents that shall sucke & drawe out the mattier.

Of Wounds in the head in which Cranium is cut, vnto the inward pannicle, without losse of substance. Chap. 4.

This kind of wound wil haue sometimes sparanks or sharp pæces of bones, & some are free frō them, & euen without sharp pæces of bone. Those y^e haue the sparanks do hurt & offend y^e panicle which is called Dura mater. Therfore they must be taken awaie with a lenticular, and made smooth & euen, & then is the cure of this wound like the other wounds in the former Chapter. For if it be in the vpper part of the head, you shall vse to mundifie and desiccate without stitching, if it be in the sides, then in the lower part of the wound you must put a tent, as is aforesayd, that the mattier may the easier come out.

Of Wounds in the head contused, without fracturing of Cranium. Chap. 5.

It is the proper scope of curing this wound to applie to it medicines that resist fluxe, and repell the mattier backe, vsing in the beginning, after the accustomed manner, the white of an egge, mixed with oyle of Roses, and so resolving the mattier gathered, you shal vse honie and wine in which salt hath ben put. But if it come to maturation, then you shall open it, and vse the cure to it that is proper for Apertumes, and such medicines as are mentioned in the generall Chapter of contused wounds.

OF

Of wounds in the head with contusion, and where Cranium
is little fractured. Chap. 6.

You must diligentlie looke whether in the place wher eas
Cranium is fractured, there are anie sharpe peces of
bones, which if there be, they must be remoued with the len-
ticular, as is afoze mentioned. Then you shall dresse the
wound, & lay thereon soft silke, wet in honie of roses & oyle
of Roses, and with your instrument you shall put in the
linnen cloth betwixt Dura mater and Cranium, and late on
it soft tents wet in Mel ros. and oile of Roses, and applie
thereon a linnen cloth wet in the same, and on the wound of
the flesh put either drie lint or a soft Spunge, to sucke vp
the mattier, and applie an head plaister, y^e the mattier close
not within. After which you shal in wine made hot, wet tow
and presse out the wine with your hand, & lay that also on,
then vpon that put drie tow, and roll it softlie, that y^e things
applied may abide on the wound. And when the wound is
mundified, then leaue off the first cloth, and vse the head pou-
der to make the wound incarnate, & so with consolidatiues
and medicines inducing a cicatrice, you shall procede vntill
the wound be perfectlie cured.

Of Wounds contused with great fracture of Cranium.

Chap. 7.

Contused wounds with great breaking of Craniū, must
be cured after this method. First you must shauē y^e haire
awate, then with an incision knife you shal cut y^e place crosse
wise, or as other do vse, which is not so good after this man-
ner. Then raise of the flesh, and make the fractured bone opē
and bare. And if there followe anie flure of blood, you must
cleanse y^e wound with linnen clothes dipt in water and vi-
neger, or the white of an egge, and if there be no flure of
blood, fill the wound with drie lint, and dip clothes in oile
and Wine, and applie it to the place, & binde vp the wound
as thereto belongeth. Then if there followeth no accidents
which may hinder the cure of the bone, open the wound & let

¶.iii.

the

The second Booke of

the patients eares be stopped with lint or cotton, & he heareth not, for making him faint hearted and afraid, & let two men stay his head with their handes, and then with your knife depart the bone, or with the lenticular. But if this cannot be done both speedely, and without great paine, then set a trappen, and bore it throught so many times, untill it be separated from Cranium, and you shall take awaie this bone fractured, first lifting it up with an eleuatozie, untill you may take it awaie with your nipers or fingers. Then you must make the edges of the bone smooth and even, and after cure it in all cases as you cure wounds where Cranium is fractured, with the taking out peeces of bones.

Of Wounds in the face. Chap. 8.

Wounds in the face are either in the fleshie parts or not, if in the fleshie parts, the wound is either drie or moist. If in the fleshie parte, and the wound moist, you must of force stich it with a fine small round needle and fine thread, but if it be in the fleshie part & drie, you shall in the place of a round needle vse a square. If the wound be not in the fleshie part, then in anie case you must leaue off stitching, & in the place of it to ioyne the lips of the wound together, you shall doe in this manner. Take Sanguinis draconis calcis ex testis ouorum, Mastiches, as much as is sufficient, make in pouder, and temper them with honie untill it come to the substance of honie. Then prepare two linnen clothes according to the length of the wound, and spread of it vpon the clothes, and then vnto either side of the wound apply a cloth and suffer it to drie. Then with your needle take your stiches on both clothes, and vnite and ioyne the sides of the wound so euen and right as may possible be, which things done, lay on the wound this pouder following. R. Sang. draconis, j. dragme, Olibani, Cacis e testis ouoru, ana. ℥. ii. Make these in fine pouder and temper them with the white of an egge, and lay it on tolw, and applie it to the wound. After you shall heale it with the same plaisters, vnguents, pouders, or balme, as you customablie doe another wound.

Of

Of wounds in the eies. Chap. 9.

All wounds in the eies or about the eies are dangerous, both for the nerues of the braine, and also for perill and losse of sight, yea, it happeneth often y through wounds about the eies the nerues optike haue bene stopped, & there haue also followed somtimes a cataract. What is then to be looked for, when as the wound happeneth in the substance of the eie? Galen maketh mention of one hurt in the white of the eies, and much moisture flowed out, and yet the patient restored to his sight. In like sort doth Brunswicke rehearse the like historie of two children wounded in the eie, & much moisture came forth, and he cured them with this water following. But these cures are *De raro contingentibus*. *Rec. Aquarum foeniculi, Rosarum, Polij, Eufragiæ, Rutæ, ana halfe an vnce, Albuminum ouorum. q. s.* These did he temper and mire together, and applied it to the eie, as he affirmed, to the great comfort, and restoring of sight in the children aforesaid. But I will goe to the cure of wounds of the eyes, which is without perishing of sight. If anie be wounded through the vpper or neather part of the eie, so that it hang downe, then with a needle being bent crooked, aptlie for the eie, and a silke threed wel waxed, you shall verie finely stitch it vp, that the tumour of the eie maye be the lesser. And put into the sight of the eie the water befoze mentioned, and make a plaister of the white of an egge, *Sanguis draconis*, and *Frankensence*, and laie it round about the eie, but beware y it touch not the eie it selfe. Also you may heale it with balme, but be diligent y none fall into the eie, & euer vse the water aforesayd, which is a wonderfull defensiu, and letteth accidents to come to the place, and thus shall you perfectlie cure the eie. And if the wound come with arrow head or sword, you shall procede with oyle of roses, & if anie thing be fired in the wound, worke after the doctrine set out in that Chapter. And when the thing fired is out, fill the wound with oyle of Roses, tempered with the yolke of an egge warme, and mundifie the wound with *Mel Rosarū, farina Hordei, & Fenogreci*, after applie incarnatiues, &

F. iiii.

heale

The second Booke of

heale the wound with the plaister vsed in græne woundes. But if it be wounded with neede or thorne, vse the mundificatiue and defensiu about the eie, and wash the eie with this Colyrium following, vntill he be healed. R. Boli armeni, vncc. ij. Thusie, Sanguis draconis, Gummi arabici, ana. ℥. j. Make these in powder, and put it into a quart of good rose water, & set that glasse in warme water thre houres. Then put to it Wine of Pomgranades, and let it remaine in the warme water (¶ Alchimists call it Balneum Mariæ) a whole daie, after straine it, and put of it morning and euening in to the eie. Also put on it this plaister following. Rec. Succu Semperuiui, Solatri, ana. ℥. iij. Boli armeni, Dragaganti, Myrrha, Gummi arabici, ana. iii. ℥. Make that is to be brought into powder, and dissolue the gums in vineger, & make ther of a plaister, & if through chaunce there falleth into the eies haire, dust, moates, or such like, open the eie, and milke in to it the milke of a woman. Also it is verie good to vse this medicine plaister wise, as the other befoze mentioned. Rec. Aquarum solatri, Semperuiui, ana, ij. vncces, Tutia preparati, halfe a dram, Coralli rubei, Margaritar. non perforat, ana. ʒ. j. Camphura, x. graines, Dragaganti, Gummi arabici, ana, viij. graines, Cerusa lota, v. graines, Lactis mulieris, Albuminis ouorum, ana. ij. drams. Mixe these together and vse it plaister wise, as is aforesaid.

Of wounds in the Eares and Lips. Chap. 10.

There is nothing in these wounds proper to it selfe, but is cured as other græne wounds, that is to saie: First stich it and lay thereon the powder mentioned befoze, made of Frankensence, Sanguis draconis, and lime of eggeshels, &c. & about the place laie some defensiu, and the third daie apply oyle of roses and the yolkes of egges. After mundifie the wound wth Mel rosarum, farina hordei, Turpentine, Sarcocoll, and Mirrhe. Then heale it vp with Balme, or the plaister vsed in græne woundes, regarding alwayes if neede require, to purge, let blood, bore and scarifie.

Of woundes in the nose.

Cap. xi.

The Nose is sometime cut of, and sometime hangeeth by the flesh of the lippes. If it be cut of, there is no cure to be vsed, for the organicke parts deuided, wil not receiue vnition and ioyning againe together. If it hang by the flesh of some other part, then stich it aptly, and reduce the nose to his naturall forme. Then put into the nostrelles tents of wolfe, or Gole quilles, that y^e head may both purge it selfe the better, and also that he may the easier draw vp the ayre. And on the wound it selfe, lay the powder here-after following. Then lay thereon the white of an Egge wth towe tempered with some of the foresaid powder, and after bynde and roule it, which thing that you may the easier and more aptly doe, let him put on his head a cappe or quasse, & sowe thereto your hande, and so may you procede in the curation of this wound, with the Balme or plaister, vsed in greene and fresh wounds. The powder applied to the seame of the wound, is this.

Rec. Thuris, Calcis ex testis ouorum, Sanguis Draconis, ana. ij. dragmes. Mixe them with the white of an Egge tempered with oyle of Roses, the defensiu may be in this manner following.

Rec. Succus solatri, Semperuiui, ana. vj. vnce. Olei Rosacei, iij. vnces. Boli armeni, ij. vnces. Aceti, j. vnce. misce.

An other defensiu. Rec. Vitellos ouorum, ij. Sang. draconis, Dragaganti, Gummi arabici, Boli armeni, ana. ij. dragmes. And if you would haue the skinne saire, then you may lay on it this vnguent following.

Rec. Thuris, Myrrha, ana. j. vnce. Farina fenogreci, ij. vnc. Resina, vj. vnce. Lithargiri auri, halfe an vnce. Olei oliuarum, ij. pound. Cera, iij. vnce. Mixe these, and make thereof an vnguent, and vse it, as necessitie shal require, and the discrete Chirurgeon think conuenient.

Of woundes in the mouth. Chap. xij.

The

The second Booke of

The wound of the mouth hath nothing proper to it selfe, but is stitched, defended, mudified, incarnated and cicatrized, after the maner of other greene wounds, therefore it were superfluous to make a vaine reherfall of the cure & medicines, seeing it is plainly set out before, and medicines prescribed, which are thereto conuenient.

Of wounds in the neck. Cap. xiiij.

Wounds in the neck sometime are made in the fleshie parts onely, sometime in the ligaments, cords, and nerues, sometime in the great veines and arteries, & sometime in the passages, where as broth, meate and drinke, goeth in. If it be in the flesh, it differeth not frō the cure of other greene wounds, but with stitching, pouder, wine, and other accustomed medicines, it is cured. If it be in the ligaments, cordes, and veines, take deepe stiches in the fleshie parts, about the ligaments, cordes and nerues, and then cure it with oyle of ground wormes, and the plaister vsed in greene wounds. If it be in the great veines and arteries, there is great perill, through the great fluxe of blood, stich the veines and arteries, & vpon them lay this pouder, which Galen vsed in the lyke great fluxes of blood.

Rec. Thuris. i. vnce. Aloes, halfe an vnce.

Take these in pouder, & incorporate the with the white of an Egge, vntill it come to the thickenesse of Honey, then put to it the haire of an Hare, and apply it to the wounded veines or arteries. Or you may vse in place of it, this pouder following.

Rec. Colophonij. iij. ynces. Consolidæ maioris, Lapidis æmatitis, Mastiches, Sang. Draconis, Olibani, ana halfe an vnc.

Take these in fine pouder and vse it as the other afoze. Afterward you shall in all cases cure this wound as is mentioned in the first booke of veines and arteries wounded. But if the wound be in the passages of ayre, meate and drinke, you shall stich it, & vse the pouder, & vse it outwardly as other wounds: but inwardly you shall giue the Dia-
simphi-

Simpliton and Diadragagantum, to lick with their tongue, and when the wound beginneth to digest, then mundifie & incorne it with this medicine following.

Rec. Mellis Rosati colati. iiii. vncc. Farinæ Hordei. v. vncc. Terebenthinæ. iij. dragmes. Cera, Refina. ana. ij. dragmes. Thuris, Mastiches. ana. j. dragme. Mirrha, Sarcocolla, Mumia ana halfe a dragme. Olei Mastiches. iiii. vnc. fiat emplastrum.

Hether to haue we shewed the cure of wounds organical, which may happen in the first or vppermost ventricle. Now in lyke maner we will direct our pen, and set out the cure of wounds, which commonly chaunce in the second or middle ventricle.

Of wounds in the brest. Cap. xiiij.

Wounds in y brest either are without percing thorough the same, or else they are into the brest. If they be without percing into the body, they are cured as other greene wounds, with tow dipt in the restrictive powder, and layed to the wound, and with the Iewes plaister, or the plaister accustomed in green wounds, or else with Balme. But if the wound be percing thzough, then it is eyther with bloud falling inwardly, & hurte of some inward part, or else it is without fluxe inward, or percing of any inward member. How you shall by signes know if any of y inward parts be hurt, I haue set out at large in the fift chap. of the first booke. As touching the cure of wounds in y brest, which are without hurt of any inward part, you shal in no wise tent the, but stich y wound, & with stufes dipt in wine, vnguents incarnatiue, emplasters, & conuenient rolling, heale it vp, like another wound. But if it be percing thzough & he bleed inwardly, & some of the inward parts are hurt, then with all expedition and hast, you must labour to bzing out such bloud & mattier as is within cōteined, & you must put in a tent large & long, on which you shal strike oyle of Roses, & fasten a thzed to the tent, that it goe not in, & so put the patient to great paine. The patient must be layde vpon a bozde on the wounded side, and so moued to and fro, y the mattier may come out at the wound, & make iniections of wine or Mellicratum with a siring, diligently marking the

The second Booke of

the quantitie & colour of the wyne oz *Mellicratum* when it commeth out, for if it be lyke in quantitie and colour, then you neede no more to make injections for all the matter within contained is quite boyded at the wound: Or you may boyle in oyle of Camomil, Lupines, Mel Rosarum, & Myrre, until the third part be consumed, then straine it & make injections with a siring as afore, & then shorten your tent, and apply this mundificatiue following, to the wound.

Rec. Mellis Rosati colati, halfe a pound. Mirrhæ, Thuris, Sarcocollæ, ana halfe an ynce. Terebinthinæ, two dragmes. Farinæ hordei, Fenogreci. q. su. fiat emplastrum.

Then you may giue him euerie morning halfe a pinte of the potion warmed, which is vsed in these kinde of wounds, whose compositions is in this sort.

Rec. Centaurij minoris, Costi, Nepite, Gariophillate, Pinpinelle, Poloselle, Summitatum canabis, Caulium rub. Tanaceti, Rubie, Glycirrhiæ, ana. vj. dragmes.

Boyle all these together in faire running water, until the consumption of the third part. Then straine it, and put thereto of clarified Honney, so much as shal be sufficient to make the potion pleasant in tast. You must also giue him to licke, of Diasparmaticon, Diadragagantum, Diasimpiton, or Diacodion, all doe comfort and strengthen the brest. And when the wound is mundified, and the matter digested, then you shall heale it with the plaister called Diapalma or Phenicinum, and with this powder following, vsing apt & conuenient rolling, according to art.

Rec. Mastiches, Mirrhæ, Thuris, Sarcocollæ, Sanguis draconis, ana. j. dragme. Make then in fine powder, and thus haue I shewed you the proper cure of such wounds as may happen in the middle ventricle, being not deadly and mortall, which do utterly refuse all kinde of curation.

Of Wounds in the third and lowest ventricle, called usually the Bellie. Chap. xv.

There are properlie three sundrie simple wounds in the region of the bellie, according to which there is three diuerse cures. For either it is a small wound not

not pearcing thzough, or else it pearceth thzough, & so dooth hurt of necessitie some of y^e inward parts, but yet they come not out: Or else it perleth thzough with hurt of the inward parts, by reason of which they come forth. You shall know what part inwardly conteined, is wounded by their proper signes set out in the fiftē Chap. of the first booke.

As touching the cure of these wounds, I will seuerally intreate. If the wound in the belly be but in y^e fleshie parts, without persing thzough, then you shall stich it, and heale it with Balme, or the plaister accustomed in grene wounds, without further difficultie. But if y^e wound perleth thzough Siphac and Myrach, and yet hurteth no other of the inward members, nor they come not out, then the cure of this wound shal be as is aforesaid in all things, except stitching. For in the first stich, put the needle thzough the one lyppe of the wound, but touch not Siphac, & after put the needle thzough the other lip, and thzough Siphac and Myrach, and make a knot vpon the thred. In the second stich, thrust the needle thzough the one lyppe, and thzough Mirach and Siphac, but in putting the needle thzough the other lippe, you shall not touch Siphac but Mirach, and make a knot without, & so procede orderly vntill the whole wound be stitched. And this is it that Galen saith, sowe Siphac to Mirach, because it is a neruous pammicle, and without bloud it cannot of it selfe take consolidation. But if any of the inward parts, as the Stomacke, Liuer, Splene, Intestines, or Bladder, be wounded, and yet by reason of the smalnesse of the wound, they come not out, nor cannot conueniently be taken forth, then you must with much wisdom and discretion, ampliat and make the wound larger, and if the wound be in such parts as are to be stitched, as the bottome of the Stomake, or intestines, then they shalbe solued as the Skinners doe accustome ouer the hand, and put vpon the seame this powder following.

Rec. Olibani, Mastiches, Dragaganti, Gummi arabici, Ana j. dragme, Sang. Draconis, Mumiae, Ana. halfe a dragme, Misce fiatq; puluis subtilis.

And then you may procede to the outward wound and stiche

The second booke of

stitch it and let the threde of the inwarde wound hang out at the outward wound, that as inwardly it doeth conso-
date, so you may take away the threde & apply to the out-
ward wound this powder following.

Rec. Sanguinis Draconis, Olibani, Calcis e testis ouorum,
ana. halfe an vnce. Make these in powder & vse it as is afoze
saide, and in all wounds of the inward parts, giue the pa-
cient wounded, the drink specified in the viii. Chap. of this
booke. Also Clifters made with stipticke wines, are mer-
ueilously commended, in like maner is this potage or broth
much commended. Rec. Aque pluuias vel fontane, Furfu-
ris treticei. q. l. Let these boyle one houre, then straine it, &
put to it these powders following, and giue the pacient to
eate thereof. iii. or iiii. times a day, or you may prepare him
broth made with a Chickin, if he be much infeebled & weake,
& put of the foresaid powder into it, but if Zirbus be wound-
ed & corrupted, then saith Galene, let the black & corrupted
parts be bound with a threde or corde, & cut away all that
is so bound, & after the stitching of y^e belly, let y^e ends of the
corde hange out, at the nether part of the wound. But if the
wound be thorough percing, without hurt of some inwarde
part, & coming forth of the same, then in this cure there are
iiii. ententions to be obserued. The first is to put such parts
in their proper places, as are come forth. The second, to stitch
or sew the wound. The third, is to apply apt medicines. And
the fourth is, that none of the inward partes suffer volo^r or
tumo^r, but be defended from accidents. The first intention
is brought to effect, if the wound be bigge & wide enough,
that with soft & gentle handling, they may be put in they^r
due place. But if by this meanes they may not be put in,
either for the straightnesse of the wound, or else because the
parts be swollen or inflamed, then you must work in this
maner. That is to say, if the wound be to straight, theⁿ you
shal enlarge it aptly with a conueniēt instrument. But if
they may not be put in, because the parts are swollen & in-
flated, then you shal labour with continuall fomentations
to put away the same, which springeth for the more parte
of coldnesse of y^e ayre. The take soft Spōges, dypt in warme
water

water, & somēt the intestines, & after somēt thē with astrin-
gent wine, which is much better then the water, and doth a
great deale more strengthen & comfort the intestines. The
second intention is perfozmed with soft and gentle hādling
& compressing the belly, being certaine y the mēbers with-
out, be rightly placed, then conueniently to sow & stitch bp
the wound according to arte. The third intention which is
done by application of medicines, is to lay that comfortable
pouder on the wound, whose description I shewed in this
chap.aboue. Also stufes with wine, incarnatiue medicines,
emplasters, & other conuenient medicines & roling, as are
according to art. The fourth intention of the cure, is done
with soft wolle wet in warme oyle, & laye it about the re-
gion of the flanks, and giue him clisters of Oyle, Dille, oz
Camomil: & also vpon the wound it selfe, to power of the
same oyles, and apply emplasters, made with Fenegreke,
Linsēde, and Althea. Or you may boyle wine & salte, with
as much flower as will suffice to make it thick, and apply
it as hot as he may suffer it, vpon his rolling, and ouer all
the parts that suffereth paine. And when this is colde, then
vse an other, and so doe so manie times, vntil the doloꝝ and
paine cease. And as touching the mattier, if any remaine
within after the stitching & curing of the wound, there is no
great regard to be had, bicause nature doth digest & resolu-
e it: & if there be any multitude, she sendeth it to the flāks,
and then the cure of it differeth not from the cure of other
apostumes, which happen in the flanks.

Of wounds in the bladder, yard, & testicles. Cap. xvj.

Wounds in any parte of the bladder except it be in
the necke of the same, (which thorough his flesh-
nesse wil receiue cōsolidation) are incurable. But
those that are in the necke of the bladder, yard, oz testicles,
haue the same cure that other grene wounds haue. You may
very wel lay on the woundes of these parts, this medicine
following. Rec. Mellis Rosarum, ij. vneces. Olibani, Mastiches,
Dragaganthi, ana, ij. dragmes.

Make

The second booke of

Make these in powder and myre it with the Mel Rosarum, and lay it vpon the wound, for it doth both mundifie & doth also defend the part from accidents, yet if for the sensibilitie of the part, there happen great dolour and paine, foment the part with oyle of Roses warme. And doe in all other things, as in the cure of grene wounds.

Of the wounds in the parts called Artus, containing the armes & legges, and first of the wounds in the armes. Cap. xvij.

These parts named Artus, hath their beginning at the shoulders, and so stretcheth vnto the hands, and beginneth againe at Ischion, and extendeth vnto the ende of the toes of the fecte. The wounds in the arme, haue no peculiar cure to it selfe from other wounds, more then that the wounds in this part must haue the most surest & strong kinde of stitching you can deuise, because of the bygnesse & ponderousnesse of the arme.

If the wound be in the fleshe, then cure it after the second Chap. of the first booke. If in the veines and arteries, then follow the methode set out in the second Chap. of the same booke. Like as if the nerues be wounded, or else the nervous places, as the ioynts, and heads of the muscules, the ligaments and tendons, and such like. &c. You must obserue the doctrine contained in the fourth Chap. And if the wound be in the bone, you may vse the like curation, that I haue taught in the ix. Chap. of the same booke.

Furthermore, if the wound be both in flesh, veine, arterie, and sinnow, then you must follow all the precepts set out in the ii. iii. iiii. Chap. And compound & mire your medicines together, according as the wound is in more parts then one. And if after the cure of the wounds in the ioynts (as many times it fortuneth) there are any knots or hardnesse left, whereby the ioynts haue not their free motion, then you shall take away this accident with this plaister following.

Rec. Lithargirij. iij. vneces, Muscilaginis fenogreci, Sem. lini.
ana.

ana, ʒ. viij. Muscilag. Maluiscici, ʒ. vi. Resina, ʒ. xvi. Oleorum Camomillæ, Ohuarum, ana, j. li. & p. Cera, ʒ. vii. Farinæ fenogreci, Sem. lini, ana, ʒ. ij. Mastiches, Thuris, ana, ʒ. j. Axungia, Pingued. Gallinaceæ, Anserinæ, Anatis, ana, ʒ. ij. Make of these a plaister according to art, and applie it to the knots, and it will resolue them and put them a waie.

Of wounds in the knees, thighs, and legges.

Chap. xviiij.

THE same cure that is required to the woundes in the armes, is also vsed in wounds of the thighs and legges. But the wounds that happen in the toyntes, as in the elbowes, knees, and other like, be most perillous and daungerous, because of the chords, ligaments, nerues, and sinnowie partes, which being wounded, bring most grieuous paines and daungerous accidents. Wherefore beside the cure set out of wounded nerues and sinnowie parts, in the 4. Chapter of the first booke, you must with all diligent skill labour to keepe the wound from paine & accidents, by purging, letting bloud, clisters, diet, repercussives, and defensatiues, and medicines that doe cease dolour, among other this is one. Rec. Olei rosacei, ʒ. iij. Lumbricorum terræ, ij. drams. Make wormes in powder, and mixe it with the oyle, and being made hot, dip cotton in it, and laie it to the wound so hot as he may suffer it. Then vpon it you shall laie a linnen cloth foure folde, dipped in wine, in the which these hearbes following are boyled, then wet your roller also in it, and roll the member, according as it is shewed in our Institution of Chirurgerie. Rec. Pilosellæ, Arthemisiæ, Betæ, Herba candelæ, ana, m. j. Vini optimi, iij. pound. Also to defend the place from accidents, this defensine following is right precious & good. Rec. Olei rosacei, ʒ. iij. Boli armeni, ʒ. j. and a halfe, Terræ figillatæ, Aceti, ana, halfe an ounce, Caphuræ, halfe a dram, Sacci solatri, Semperuiui, ana, j. dram. Make all these together in forme of an vnguent, and vse it about the wound. The other medicines hereto belonging, you shall finde in the Antidotarie, and also in the 4. Chapter of the first booke.

G.

And

The third booke of

And thus haue I set out to you both bylesse and plainlie the cure of wounds in the instrumentall parts, & also wher in they differ from the wounds in the similier parts. Now will I shew you the cure of wounds which happen through biting of a mad dogge, or stinging with a Snake, Adder, Scorpion, or such like, and then will finish this second booke.

Of wounds comming through biting of a mad dogge, stinging with a Snake, Adder, Scorpion, and such like. Chap. 19.

Although the cure of this wound rather doth appertaine to the Physition than to the Chirurgion, yet (requiring no small part of this art to the cure of the same) I will shew the cure of it according to the most approued authors, Grækes, Arabians, and Latinists. And for because all virulent biting of venomous beastes and Serpentes haue well neere one cure, I will shewe the waie and manner to cure the biting of a mad dogge, vsing it for an example to follow in the curation of the rest. Galen in the 13. booke of his Therapeutik methode, sheweth two indications in curing these wounds, the one is, the euacuation of that virulent liquor, the other is, the alteration of that which causeth dolour and pain. The euacuation of the virulent liquor, is done by hot medicines, which doe attract and draw. Among which, Aetius doth meruailously praise Theriacam Andromachi, made plaister wise, & applied to the wound. Also he vseth a plaister vnto the same being of meruailous effect, whose composition is in this sort following.

Rec. Argenti spumæ, Cerusæ, Resinæ, ana. j. pound, Olei veteris, iij. pound, Cera, vij. ounces, Ammoniæ, Galbani, ana, iij. ounces. Make of these a plaister according to art, and apply it to the wound. Also they vse to bore the wound and to cauterise it, either with an hot yron or with some caustike medicine. Also many vse to pull off the feathers from the rumpe of an hen, and holde the rumpe to the wound to suck and draw out the venim. Cornelius Celsus doth much commend salt to be rubbed on the wound. Guido hath a plaister
verq

berie sharpe, but yet much commended, and is made in this manner.

Rec Galbani, Sagapeni, Opoponacis, Assæ fetide, Myrrhe, Piperis, Sulphuris, ana. ʒ. ʒ. Stercoris columbini, Anatis, ana, ʒ. ij. Calaminthæ, Mentastri, ana. ʒ. j. Dissolve the gums in wine, and with honie and oyle make hereof an emplaster. Take also diligent hærde to enlarge the wound and keepe it open at the least fortie daies, and prouoke matter to flowe out as much as is possible, and when you suppose the venim to be al drawen out, the you shall with mundificatiues, incarnatiues, & medicines that doe cicatrise, heale the wound. But you must not forget to applie medicines inwardlie against venim called Alexipharmaca, which of their proper tie doe resist poison. Among which Galen in his 11. booke, intituled, De facultatibus simplicium medicamentorum, reciteth this medicine following to be of most meruailous vertue against the biting of a mad dogge.

Rec. Thuris. ʒ. v. Gentiane, ʒ. x. Cancrorum fluuiat. ʒ. xx. Make these in powder, and giue him two spoonfulls of this powder in fountaine water for the space of fortie daies. And vnto the wound the same Galen saith, his Plaster Aschriou vled this plaister following.

Rec. Picis. j. pound, Aceti acerrimi, Sextarium italicum, Opoponacis. ʒ. iij. Mire them and make them in a plaister according to arte. This is the methode of curing these kinde of wounds, and these be the chiefe and principal medicines, which like as diligentlie I haue collected and gathered out of the principall authoꝝ writing of the cure of these

kind of wounds, so with I them to put it in
prose when necessitie requireth, and

also to take thankfullie

these my labours
and paines.

F I N I S.

The third booke of the En-

chiridion. Setting out the remouing of such accidents
as happen to wounds : By Thomas Gale, Master
in Chirurgerie.



Now that we haue brought to an end and shewed the methodicall cure of wounds, as well in the similer as also in the organicall members of mans bodie, and haue set out diuerse, & those both excellent & also approved remedies for the same, I thinke conuenient in this third booke to shew the perfect curation of such accidents as doe customablie follow in wounds, either thorough the nature of the wound, or vndiscrete vlsage of the patient, or else through the error of the Chirurgion. These accidents are called of the Greeke writers Symptomata, & be such, as when they happen in wounds, you shall neuer cure the wound before you haue quite put them away, & the accidents which commonly happen in wounds, for the most part are these following : that is to saie, dolour, inflammation, distemperance, a feauer, puritus, conuulsion, & pallsie, syncope, & alienation of minde. Of these so briefly and exactly as I can, I will in order make mention ; willing this booke to supplie onelie the place in time of neede, where the learned Physitian cannot be had. And first we will begin with that accident which is called dolour or paine in wounds.

Of dolour in wounds, and the asswaging of the
same, Chap. i.

This accident, called dolour, paine, or griepe, bringeth a fluxe of humours to the wounded parte, & stirreth most grievous accidents, as Phlegmon, otherwise called inflammation, Apostumes, & such like, yea, & that in those bodies which are pure and free from excrements, wherefore with all diligence you must labour to cease the dolour, or at least, to mitigate it somewhat, applying to the place somentations
with

With oyle of roses warmed, mixed and tempered with the white of an egge. But if the paine be so vehement, that with this medicine, it will not be mittigated, and that you are constrained to vse some stupefactines, you shall make your fomentation with oyle of Poppie, and if great vrgent cause constrain you, you may adde a little Opium to it, or oyle of Mandrage. There are other who do much commend this emplaster following. Rec. Radici Solani, ʒ. ij. Foliorum malux, m. ij. Furfuris triticej, iij. ʒ. Olei rosacei, q. s. fiat emplastrū. Also other do apply to the affected part an emplaster made of bread or wheate flower boiled in milke and some oyle of Roses. And these cease the dolour and paines two waies, both in resoluing some part of the matter gathered by reason of the fluxe, and also in allwaging somewhat the vehemencie of the paine by the qualitie of the medicine. But of the medicines which do allwage and cease dolour, you shall haue it moze at large set out in the Antidotarie.

Of Inflammation and Apostomation.

Chap. 2.

That which the Grækes call Phlegmone, we vsuallie tearme in our language, Inflammation, and is no other thing than a vehement heate stirred in anie parte of the body through the force of the humors flowing to the part. There are foure intentions to be followed in the cure of an inflammation. The first standeth in the right order of diet: the second, in ceasing the fluxe or diuersion of the antecedent matter: the third is an euacuation of the matter collected and now impact in the part affected: the fourth standeth in the correcting and putting awaie of accidents. The first intention is fulfilled in the right vse of the fire things called Non naturalis, as in the purenesse and temperatnesse of the aire, the meate and drinke, colde, moist, and smal. To flie exercise, and to vse quiet and rest of bodie: To vse moderatnesse in sleeping and watching. To beware of sursetting, and laying (as they saie) gorge vpon gorge. To keepe alwaies the bodie soluble & loose. To flie all vehement perturbations & affections of the minde, as anger, contention, chiding, & such

G. iij.

like.

The third Booke of

like. Last, you must abstaine from Venus seruice, as fro the greatest pestilence that may be in this disease. The second intention, which is in ceasing & diuersion of the mattier that floweth, is by opening a veine in the contrarie side, if y^e age and strength of the patient can suffer it. Also applie medicines to repell and dꝛiue back, among which Galen praiseth Oxycraton (that is) water and vineger boiled together, and foment the place with a sponge dipt in it. Also you may boile in some astringent wine the rinde of a Pomgranad, & foment the place therewith. Or else applie to the place inflamed Cataplasme, which Galen in his second booke ad Glauconem doth so much commeno, whose composition is in this manner. Rec. Semperviui, Malicorni, Sumach, sing. q. s. Boyle this in wine vntil it come to the forme of a Cataplasme. Also Auicenn in his 3. Fen. 4. booke. First Tract. Chap. 3. describeth another of much efficacie. His composition is in this forme. Rec. Succu Sēperuiui, i. pound, Vini nigri, half a pound, Farinæ Hordei, ʒ. iij. Malicorni, Sumach, ana, ʒ. ʒ. Boile these and make therof an vnction, but or you boile these, you must make the Malicozum and Sumach in powder. The third scope in euacuating, that is collected in the beginning of inflammation, is done with repercussive medicines, and to mire with these such as doe digest the mattier, among which this is one.

Rec. Rosarum, Florum camomillæ, ana. ʒ. iij. Sapx, ʒ. j. Aquæ Fontanæ, one pound and a halfe. Boyle these and make an emplaster of them, but if the inflammation be in Augmento, then you shall mire with your digestiue medicines that represse and letteth the flure. But when the inflammation is in Statu, then mire with the foresaid medicines, medicines that doth somewhat mittigate, as oyle of Roses. Also you may vse this emplaster, which in this sorte following is described. Rec. Parietaræ, Malux, ana. m. j. Furfuris, Farinæ volatilis, ana. ʒ. i. Fenograci, Anethi, ana. j. ounces, Olei camomillæ ʒ. vi. Boile all in wine while they come to y^e substance of an emplaster. There is also another excellent plaister which Galen vseth in the vigour of an inflammation, and is thus made. Rec. Medullæ panis frumentacci, one pound.

¶ et

Let it steepe in hot water for the space of an houre, and then straine it, and put to it Mellis optimi, ℥.iii. Make of these an emplaster, and applie it to the inflammation, but if the inflammation be as they call it in Declinatione, you must onelie vse medicines to digest, which maye euaporate the matter remaining: if y^e inflammation doth end by euaporation or discussion. But if it turns into an Apostume, then you must vse medicines to suppurate, to open, & to mundifie, of which you shall haue a large discourse in my booke of Tumors against nature, and also in my booke of curing vlcers. The fourth scope of removing, or rather defending the inflammation from accidents, as dolour, Feauer, Apostume, and such lyke, requireth diuerse and sundrie remedies, which because they bee accidents also chancing in wounds, I will intreate of them in their proper Chapters.

Of removing and taking awaie distemperance in wounds. Chap. 3.

That distemperaunce which happeneth to mans bodie, whether it be hot, cold, moist, or drie, or else compounded of these simple, Galen and all the Grecians comprehended vnder the name of Discrasia. Of which, if to the wound there cometh a hot disposition, which you may easilie coniecture by the great rednesse and bellication, you must infrigidate the place, not with Herbane or Bandage, but rather with Roses, Plantaine, and Vnguento albo, which doe as well desiccate, as moderatelie make colde. But if the distemperance be colde, which you may iudge by the softnesse and Leaddie coulour of the skinne: you shall put these awaie by medicines contrarie in qualitie, which doe moderatelie heate. So y^e you may not applie Rosen, Pitch, or Asfaltum, but Wine, Vnguentum nigrum, or fuscum, or Basilicon. So in lyke manner if the wounde bee too moist or too drie, they must be cured by their contraries. And here is to bee noted, that if the distemperaunce bee in heate and moisture, or else in heate and drynesse: in colde and moistnesse, or else in colde and drynesse,

¶ C.iii.

then

The third Booke of

then your medicines used in the simple distemperance, must be mixed together contrary to the compound distemperance.

Of convulsion which happen in Woundes.

Chap. 4.

Spasmos, which we call convulsion, is no other thing than a depraved motion chauncing to the voluntarie facultie of moving through sickness. Convulsion chaunceth three sundrie waies, by repletion, by inanition, and by societie or participation to the braine. The generall methode in curing these three sorts, is to holde stronglie, and to chase and anoint them with oyle of Lillies, or else with common oyle in defect of it. The convulsion springing by inanition is cured in this manner. First, foment the place with oyle, or els with Hydreleum made warme. Also if no other thing be let or impediment, you shall use a bath in which is boiled the head and feete of a sheepe, goat, calfe or lambe. Also in which is put Mallowes, Althea, Violet leaves, Beates, and Mercurie, putting to it the third part of oyle. Some there bee which with great profit do use this liniment following, anointing with it the ridge bone or spine of the backe, and all the ioyntes.

The Liniment. Rec. Olei violarum. ℥. iij. Amygdalarum dulcium, Pinguedinis Gallinae, Medullae crurium vituli, ana. ℥. vj. Pinguedinis vituli, Hedi, ana. ℥. x. Boile all these in the decoction of Mallowes & roots of Althea, unto the consumption of the sayd decoction, then straine them and make a liniment of them, and use it as I have aforesayd. But if the convulsion come of fulnesse, you must cure it by euacuation of the whole bodie. But ther be two waies to euacuate, that is to saie, by letting blood, & by purging. But we let blood in those bodie in which there is abundance of blood, or els where inflammation hath caused convulsion, although there bee no abundance of blood. But if the fulnesse bee of humours, then you must purge y^e which doth offend, whether it be flemme, cholar, or melancholy, but grosse & viscus humours are to be expelled with Hierac, Hierac, & Agarike. You must also

also vse sharpe clifters, also gargarismes, apophegmatismes and nœsing, y the grose fleame may come forth by the nose and mouth. The body being thus purged and let blood, anoint the neck, armepits, and flankes, with this liniment following.

Rec. Oleorum liliacei, Costini, Spice, ana. ij. vnces. Laurimi, Castorei, Euforbij, ana. halfe a dragme.

Mixe these together, and vse it as before saide. Also Rogerius and Theodoricus, doe much in this sicknesse praise the vnguent, whose composition is in this maner.

Rec. Olei muscellini, j. vnce. Petrolei, halfe an vnce. Olei communis, Butyri, ana. iij. 3. Styracis calamitæ, Rubræ, ana. ij. 3. Mastiches, Olibani, Gummi haderæ, ana. halfe an vnce. Cera. an vnce.

Make these in an vnguent, according to arte, and with this vnguent moderately heate, anoint the whole necke, & all the spine of the backe. Last of all, if the conuulsion cometh by consent and societie of parts, and springeth of dolor, you must cure it by medicines called Anodina, of which we haue made mencion in the first chap. of this third booke, & also in our Antidotarie. But if it appeare by the byting or sting of any venemous beast or serpent, you shall apply bores to the wound, and make a plaister of Triacle, & lay to the place, and vse the same methode of curing that is set out in the last Chap. of the second booke. And if conuulsion insueth, because sharpe and corrodng humours doe byte & fret the mouth of the stomacke: then with all diligence you must prouoke him to vomit, and after strengthen the stomacke both outwardly and inwardly, with apt and conuenient medicines, following the counsel of some expert Physician. Furthermoze, in all conuulsions, this is a general rule, you must strengthen and corroboreate the braine. Therfore shauing the haire, you shal somēt the head, neck, armepits, flankes, spine of the backe, & ioynts, with oyle of Lillies. If these doe not take place, thē according to Galens doctrine, you shall cut the nerue a sunder. For (saith he) it is better to suffer hurt and losse of one part, then to looke for a certaine and ineuitable death.

The fourth Booke of

Of the Palsey comming of a wound. Cap.v.

PAralysis, which we in English call the Palsey, is the relaxation and molifying of the nerues, with losse of feeling and mouing of one side or part of the bodie. This accident sometime folleweth vehement conuulsions, and chiefly after great woundes in the head, and in the spine of the backe. It doeth shew forth this might. The cure of the Palsey is in this wise. First you must euacuate the bodie by purging of the humours, and euacuating the bodie. Pea by letting of blood also, if necessitie requireth. Further to diuert the fluxe which goeth to the resolved part, vsing also a cōuenient dyet, in all which it is necessary to cōsult with the learned Phisitio. These things being done, then let the Chirurgion with diligence apply locall medicines, among which many doe vse Emplaisters, Cataplasmes, Unguents, fomentations, boxing, and diuers other remedies. But Guido (out of Mesue) hath chosen a most precious liquor, and against this accident of most wonderful effect, with which he annoynteth the spine of the back, the necke, and the part resolved, and surely there is no remedie comparable to it. Pea, and Guydo leauing all other medicines, held him selfe wel satisfied and pleased, onely with this so precious a treasure. But I will omit the praise of so noble a liquor, seeing my wyt is to simple, & my penne to rude to doe that herein is required, and therefore I let that passe, and wil shew you the composition.

Rec. Myrrhe electa, Aloes hepatica, Spica nardi, Sanguis draconis, Thuris, Mumia, Opoponacis, Bdelij. ana. ij. ʒ. Car-pobalsami, Ammoniacy, Sarcocolla, Croci, Mastiches, Gummi Arabici, Styracis liquidæ. Ana. ij. dragmes, Ladani electi, Succu castorei. Ana. ij. dragmes, se. Musci. halfe a dragme. Terebin-thina optimæ ad pondus omnium.

Beate all those to pouder, that are to be brought to pou-
der, and mire all these with the Turpentine, and put them
in a

In a vessell of distillation, and with a softe and gentle fyre drawe out this most precious liquoz, and if to this composition you dyd adde such hearbes as are vled in curing the Balley, you should make your medicine so much the more precious.

Of Syncope or sounding, through cause of the wound. Cap.vj.

GALEN in the twelfth booke of his Therapeutike methode, sayth, that Syncope is a sodaine decaye of strength, comming through immoderate euacuation, vehement dolour, continuall watching, intemperatenesse of the principal parts, or vehement perturbations of the minde. But Syncope which followeth in wounds, springeth for the more part, of great effusion of bloud, or else of vehement dolour. And you may easely coniecture the comming of it, by the weakenesse, pulse, palenesse of face, colde sweates about his neck and temples. And this accident is not lightly to be regarded, bicause it suddenly commeth, and is as if were the image of death. Therefore comfort the wounded man by all meanes possible. Suffer no great companie to be where hee is, and before this accident come, giue him a peece of fine white bred sopped in y^e best wine you can get, into which wine you shall put rose water, bozage water, and a cake of Manus Christi perlati, and after you haue tasted of the bread, giue him of y^e wine to drinke, and comfort him with sweete sinelles, and chafe his temples with Rose water, and if he begin to sound, cast colde water on his face, and chafe and rub his temples with your hands, pull him by the nose, exclaime and call him loude by his name, rubbe his hands, and pull him by the eares, and doe what you can to reuiue and quicken his spirits, as is the custome of learned Physicians.

Of alienation of the minde comming by reason of the wound. Chap. 7.

Delirium

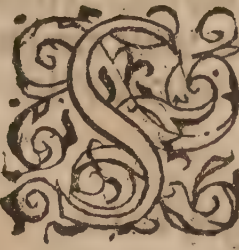
The fourth Booke of

Delyrium, or alienation of the minde, is a motion depa-
uate, of the principal facultie: taking his beginning of
euill fumes ascending to the head, and also of intem-
peratenesse of the braine: it doth diuers times fortune the
braine to suffer of it selfe, and sometime by consent with
other parts. But I will speake onely of that alienation of
minde, which commeth by consent of parts. Wherefore if that
alienation of mynde apprehendeth the patient after he be
wounded, you must cal some skilful Physitian, which with
potion, frictions, binding of the hands and fete, sharpe cli-
sters here to apt to attract the fumes and vapours from the
head, & when the vigour of this accident infesteth, it is good
to powze on his head, the decoction of Poppie. For Galen
saith, we must labour to abstaine somewhat the braine, and
prouoke sleepe by all meanes possible. Auicen saith, that ma-
ny haue bene deliuered of this accident, by vsing certaine
dayes, the decoction of Bryonie rootes. And thus I haue set
out the most notable and perillous accidents, which happen
in wounds, with their intentions curatine, and proper me-
dicines vsed in the same. Wherefore I thinke it good here
to finish this third booke.

FINIS.

The fourth booke of the

Enchiridion, comprehending the maner of cu-
ring fractures, and luxations: by Tho-
mas Gale, Maister in Chi-
rurgie.

ing I haue hether to in their proper books
set out the cure of all those wounds, which
may happen in the softer parts of mannes
bodie, as in the flesh, muscles, veines, arte-
ries, nerues, tendons, ligaments, and such
like: and haue further shewed sufficiently
the methode to put away such accidents as happen to great
wounds (for to great wounds cometh great accidents) time
now

now taketh me by the sleeve, and saith, direct thy penne, & addeesse thee to wyte of those wounds, which happen in the hard parts of mans members, that is to say, in the bones. Such be those wounds which are called fractures or breaking of bones, in Greke Catagmata, and also of luxations & dislocations of the same, which bicause both are affections comming to the bones, I will wyte of both in this fourth & last booke of this Enchiridion, beginning first at the fracture of bones, which done, I wil also intreat of dislocations.

Of the true and perfect cure of bones
fractured. Chap. j.

BEfore I doe take in hand to intreate of y cure of bones fractured, I will set out what a fracture is, that thereby it may be the better understode, that hereafter shalbe wytten. Therefore a fracture is a solution of continuitie, made in the bone. Of bones fractured, there be three differences. One when the bone is broken in length, another when the bone is fractured ouerthwart: the third, when as the fracture is oblique or crooked.

Albucasis, and other latter wyters, make the differences of fractures, not according to the bone fractured, but after the place affected, as if the nose be broken, or the braine panne, or Jawes, rybbes, backbone, armes, thighes, legges, fingers, or other part: which in deede be not differences of fractures, but as I sayde, of the place affected, according to the nature of which, the bones broken, haue spedier or longer time or they can be vnited again together. For the Cranium is ioyned together in xxxv. dayes, the arme or legge in the space of lx. dayes, the Fosilles, aboute xxx. dayes, the nose taketh perfect consolidation in xviii. dayes, the ribbes in xxi. dayes, the Jawes, the bones in the handes, and fete, about xx. dayes. And so in like sorte is to be spoken of the time of curing other bones fractured, according to their natures, also the time may be longer or shorter, according to the age of the patient, time of the yere, dyet & order of lyfe. All which must be diligently considered of him that wil appoint

The fourth booke of

point any time determinately in curing of bones. But note to y^e true & perfect cure of bones fractured. And for because the fracture is a solution of continuitie, there is required the vnition againe of the same. But to the vnition of the fracture are required foure scopes or intentions.

The first is that the parts of the broken bones be ioyned and put together in their proper place. The second intention is, y^e they being so reduced to their natural forme, may so be conserued and kept, without motion.

The third scope is, that the partes of the broken bone may be conglutinated and ioyned together, by engendring of Callus. The fourth and last intention is, to correct those accidents, which doe come after the fractures of bones. Of these foure scopes & intentions, according to my poore knowledge, I will seuerally intreate.

How the parts of the bone fractured, are to be vnited together and put in their proper place. Cap. ij.

First of all it behoueth to note diligently, whether the bone broken be out of the naturall place or not, which you shall know by these signes, saith Cornelius Celsus. For if the member where the bone is fractured, doth exte^d it selfe and stand v^pward, and is with prickⁱng, and when it is touched, it sheweth an inequality. These be sure tokens and signes that the bone broken, is out of his natural place, wherefore after the counsel of Guydo de Cauliaco, the member is decently to be extended, & that parte of the bone that is depressed, is to be lifted v^p, & that other parte which is standing v^pwarde, must be put downe, and this with so much lenitie and smal paine as is possible, vntill the ends of the bone fractured doe mee^te and be vnited and brought to their naturall forme and place. Neither is this possible that the bones fractured and brought out of their naturall place, can be reduced & rightly vnited and placed, but with some force, more or lesse. So that if the member be smal & of no great strength, as y^e finger or other like me^mber, one man may well extend and stretch it out, applying his one hand

on the one part, and the other hand on the other part of the broke bone, vntil both endes of the bone fractured, do meete and ioyne together. But if the member be great, hauing strong nerues and tendons, then one man is not sufficient, but there is required two: specially where y fracture chan- ceth in the thighes, legges and armes, of strong and robust persons. But you must diligently take hede that the mem- ber be neuer to vehemently or immoderately extended and drawen out, for that doeth bying (speciallye in harde and drye bodies) vehement dolour, feuers, conuulsions, & some- times the Palsey. Pea, it happeneth often by this meanes, that the fibres and thredes in the heads of the Muscles, be broken. Wherefore there is much wisdoms and discretion herein to be vled. But now to that from whence we are digressed. First the sicke man is to be set in a chaire, or else if it be more conuenient, layed on his back on the bedde.

Then two men for this vse prepared, you shall commaund the one to holde with his hands the part of the member a- bove the fracture: and to the other, to laye his hand on the nether and lower part of the member, vnder the fractured bone. And this being done, willing them so long to stretch and put out the member, vntill both endes of the bone doe meete, then thou with thy hands shalt handsomely forme it and put it in together, laboring to bying it to his naturall figure and forme. But if the member be such as that with their hands onely, they are not able to extend the same, then you must haue bands of which the one shalbe fastened aboue the broken bone, the other vnder: and so the one man plac- ed at the sicke patients head, and the other at his fete.

They shall stretch and extend out the member as is suffici- ent with the bands in their hands.

And this is a sufficient token that the bone broken is reposed in his right place, and that both endes be vnited to- gether: when that the patient feeleth a releasing of his paine and dolour.

The bones being thus ioyned together, least that they should goe a sunder againe, it is necessarie to rolle & bynde it in such wise and maner as shal here after be set out.

And

And if it so fortune that the broken bones be not vnited but remain out of their place a few dayes, ther accustomedly followeth great inflammation, and no small perill and daunger to the nerves and tendons. And thus briefly and sufficiently I haue set out the first intention. There is also an instrument vsed to extend out the member with, of which Hippocrates and Paulus maketh mention: which you may prepare and vse, but I omit it, and vse the way aboue said, as moze apt and without perill.

How the broken bones vnited and ioyned together aptly, may be kept and remaine in the same figure, so that they may come to their former estate.

Cap. iij.

When as the broken bone is reduced to his right place, and is formed according to his natural figure: it is very expedient to keepe it in the same, which cannot be in any wise if that the member be moued. Wherefore it is necessarie by all meanes possible to keepe the members without motion. Which thing although the patient perhaps in the day time will carefully regard, yet at night when deepe sleepe doth occupie his senses, he shall of force neglect. Therefore that as well day as night, sleeping as waking, the member may be conserued without motion, it shall be necessarie to vse apt & conuenient ligature & rolling. But before you doe goe about to rolle the member, it is very good to mixe the white of an Egge & oyle of Roses together, and wet therein a soft linnen cloth of such bignesse as may compasse not onely the place where the bone is fractured, but also somewhat of the sound parts. Then this being applied to the affected part, you shall next bynde and rolle the member, in which you must diligently regard that you compresse not the member by too hard rolling, and so the nourishment cannot come to the part, and also dolour and paine may cause flux of humours and inflammation, neither must you bynde it too slacke and loose, for then the broken

broken bones will separate againe and go in sunder. Ther-
 fore you shall vse a meane herein, that you binde not the
 member too straight nor too loose, but follow herein both your
 owne discretion and also the feeling of the patient. And as
 touching your rollers, you must haue two made of soft cloth,
 whose breadth & latitude must be such, as in rolling there be
 no loosenesse, widenesse, & plaits: the length of these cannot
 certainlie be shewed, but must be according to y^e bignesse of
 the fracture, & thicknesse of the member. The beginning of
 the first roller must be vpon the fracture, & so rolled about
 iii. or iiij. times, & the rolling vpward vntill you come to the
 sound parts which must also somewhat be rolled. So by this
 meanes y^e bones vnited shall more firmly remaine together,
 & the flure of humors staied y^e they cannot come to y^e affected
 parts. The beginning of the second roll must also be put vpon
 y^e fractured place, going also iii. or iiij. times also about the
 same, & so continuing downward vntil you haue compassed
 the sound parts, which done, you must with the same roller
 ascend vpward againe, vntill you come somewhat aboue the
 first roller. Therfore this roller must be halfe as long againe
 as the first roller is. The vtilitie of this second rolling is, y^e
 it putteth y^e is superfluous vnto the lower parts, & suffereth
 not anie flure of humours to infest & mole the part affected.
 These rollers would be wet in water and wine mixed to-
 gether before you doe vse them. And if there be anie vehem-
 ent paine or inflammation, then the member would be wrap-
 ped about with fine wooll wel carded, or else with stufes wet
 in Oxycratum, & the ligature or rolling would not be hard,
 but such as may defend and keepe the vnited bones together.
 Furthermore, because these bindings and rollings are not
 able both to defend the member from accidents, and also to
 keepe the member together and confirme the same: Hippo-
 crates vsed certaine plaisters or cerotes, or such like, which
 must be put vpon the ii. rollers, & is as it were y^e third liga-
 ture or roll, among which is vsed Cerotū humidū, made of
 ware melted in oyle of roses. But if that there be besides the
 bone fractured, the solution also of continuitie in the flesh,
 then you shall not in anie wise vse either cerote or oyle, be-

The fourth booke of

cause it will make the vlcer filthie and stinking. But in their place to vse Plimaciols that be long, dypt in red and Riptike wine. And one thing which keepeth the member fro Dolour and paine is, after that the same is rolled and aptly put together, to plate it in his naturall foyme, so nere as you can, & it is most nigh vnto the naturall foyme & figure, when it is so laide, as is with least paine, and grieffe, but because this foyme & figure should be surely conserued & kept, and accidents put awaie, the later Chirurgeons haue vsed to put about the ligatures certaine splents at the first dressing, binding them so about the member, as the patient of accidents may suffer. Galen and the olde wyters vsed not splents befoze the senenth or ninth daie, notwithstanding it is conuenient to vse the splents at the beginning, so y they thzough binding compresse not the member, and make Dolour and inflammation. The splents must be equall, smooth, euen, not crooked or rugged, and in the middest thicker than in the other parts, that they may be the moze able to strengthen the member in that place whereas the bone is fractured. The way and order in applying splents is in this wise. There must be clothes thre or foure folde dypt in rose water, and laide vpon the rollers, according as the member requireth. When the splents inuolued, and wound about with wolle or cotton must be placed round about the member a finger breadth a sunder, & bind them moderatly and gentlie, y you compresse not the member, and in anie case take heed y none of the splents touch anie ioynt, if anie be nere the fractured bone, for that wil make vlceration and inflammation in the same ioynt. Therefore if the fracture be nere to anie ioynt, you must in y part make your splents shorter, smaller, & lighter, and if no Dolour, no inflammation, no itching, no vlceration commeth to the fractured part, then you may let the splents remaine on, vnto the xii. day, or xv. day, yea, or to the xx. daie. But if anie of these happeneth, then it shall bee conuenient to vnrroll the member the third day, and foment it with luke warme water, whereby both the sharp & accozding matter is washed, the paine ceased, and the itching put awaie. And thus much touching the second intention.

How

How the parts of the bones broken may be conglutinated
and ioyned together. . . . Chap. 4.

Seeing that the fractured bones cannot be conglutinated & made to grow firme together, neither by apt and conuenient rolling nor splenting, nor by putting of them in their naturall forme and figure, except there be made somewhat to grow out of the nourishment of y^e bone, which may cause them to close and grow together, they call this Callus, which like a glew doth glew them together: therefore y^e third intention is to make this Callus to growe by all meanes possible, but this must be engendred of grosse & earthie parts, such is the nourishment of the bones. This Callus after the minde of diuerse, do begin to grow about the tenth or xiij. daie. And that it doth begin to growe you shall perceiue and iudge by those signes and tokens. The dolour & paine is all wagen, the inflammation ceaseth, the tumour banisheth awaie, the naturall colour of the member commeth againe to the same. And for that the chiefe and principall waie to make Callus grow and ingender, I haue in apt and conuenient diet, I will briefly offer the same vnto you. Although at the beginning of the fracture Hippocrates counsaileth that the patient doe vse a thin and small diet, & that he doe abstaine from flesh and wine for the space of x. daies, yet now when as our scope is to ingender Callus, you must license him to vse a more large diet, and meates that make good iuyce, & that grosse and somewhat viscos, for of such nourishment y^e bones are nourished & Callus groweth. Therefore they commend much fine and pure wheate boiled in cleane fountaine water while the wheate doe burst, and the water being so concocted is somewhat thicke. They call this with vs in England, Frumentie potage, and I suppose it to bee that which diuers call Alica. Also the heads & feet of beasts are verie good in this case, chieflie of a kid or elie a weather, for these doe much nourish, and bee of grosse and viscos iuyce. Also giue him to drinke good redde wine when as he goeth to his meate, but let it bee moderatly taken.

The bignesse of Callus must not be either bigger or lesser than is requisite, for being bigger or lesser it bringeth paine to the muscles, and if it be lesser, then it is vnable to defend and strengthen the fractured bones. Now Callus shall bee that it be neither too big or little, you shall see set out in the Chapter following.

How the accidents which happen to fractured bones are to be removed and put awaie. Chap. 5.

This fourth scope and intention, although it be the last in order, yet is it not the least in vertue and vse, for it doth shew how to remove all accidents and things against nature, which doth let and hinder the curing of the fractured member. Such accidents for the most parte are dolour or paine, inflammation, itching, a wound, immoderate drynesse or moisture, letting & hindering the generation of Callus, Gangrena, hardnesse, & the quantitie of Callus too much or little. These, as I saide, be the chiefe enemies to hinder natures worke, and I will set out the waie to expell and put away enerie of them, beginning first with the accidents called dolour or paine, & with inflammation, named of the Grecians Phlegmone. Wherefore if these accidents do infest & besiege the fractured member, after it be bound, rolled, & dressed, you shall with speed loose the ligature & take awaie the roller, and then the member being bare and naked, you shall foment it with oile of roses, vineger, & with other like medicines before remembred in § 3. booke, wher I writ perticularly of the cure of these accidents. Neither shall you vse again either ligature or splents before the dolour be allwaged, & the inflammation ceased, except it be onelie to strengthen the member and keep it together. But these accidents being expelled, then vse splentes and rolling as you did before. But if this itching, or as they call it in Latine Pruritus, with sanies or matter happeneth, then Hippocrates and Galen vsed to foment the place with water temperatlie hot. And the later Chirurgions in the like case doe applie salt water, vnguentum album, vel vnguentum Populeon, and binde the member, as is also sayde. Furthermore, if to the fractured member

member there happeneth a wound either at the breaking of the bone, or else made of a Chirurgeon, that he may take out the Meevers of the bone molesting the muscles, or howsoever it doth happen, you must, if there be any fluxe of blood, labour to stanch and stay the same with apt and convenient remedies set out in this booke. If inflammation followeth to the wound, it must be repelled. If the flesh bee bruised and contused, then scarifie the partes for feare that Gangrena doth followe, and if so happeneth that Gangrena doeth followe, or any devouring putrefaction, then you must cure it as is set out in our methode of curing Tumours against nature. And if none of these happeneth, then you shall vse the like medicines to the cure of the wound that you doe to greene and fresh woundes. Furthermore, if the bones bee immoderatlie drie, whereby the growing of Callus is hindered, it shall bee convenient the third and fourth daie, to foment the place with water, and when as the flesh doe rise in a tumour, then cease further to vse fomentation, except you doe intend to euaporate and digest the multitude of mattier, then cease not untill the tumour goeth away. And if moistnesse followeth in the fractured member, and letteth the ingendering of Callus, you shall put it away with convenient ligature and rolling, and things that doth moderatly exicate. Furthermore, you shall give diligent heed when Callus doth grow, yf it may be staid, least that it waxe to greate, or increased, if you thinke it will not be of convenient bignesse, and both these points do consist in diet, in the quantitie & qualitie of the fomentation, & in convenient medicines. Of medicines those are to be vsed which do moderatly heate, and is made plaisterwise. Among which, the pitched emplaster is not the least of price, for both doth augment the Callus & draweth nourishment to the broken member. This is to be vsed when as we thinke to make the Callus bigger, but if Callus be too big, then you must make it lesse with medicines which doe digest & be astringent. Also with compressing ligature, and a plate of lead applied to the Callus. Also frications & fomentations made with oyle, salt & salt Peter, or wth salt water made hot, but if the Callus be

The fourth Booke of

growen too much, & that into a hard & stonie substance, then you must cut the flesh, and with knives and other convenient instruments, the Callus is to be minished. Also it so happeneth that the Callus doeth not growe at the accustomed time, which cometh of sundry causes, that is to saie, either of immoderate fomentations, or vntimely motion, or through the multitude of rolling, or so that the bodie is not sufficiently nourished, which appeareth, when as the member affected is leaner and slenderer than it was naturallie. Therefore with all diligence you must looke to this thing, applying hot attractive medicines to that parte, and cause his diet to be more larger, & causing the patient to embrace mirth, and banish heavinesse and such passions of the minde as may bring the bodie into a melancholik disposition. And this shall be the signe and token, that the bones fractured be conglutinated with Callus, when as the rollers and things wrapt about the member do appeare bloudie, no wound being in the member. Which thing I suppose do spring when as the substance of Callus cometh together, and going into the hollow parts of the bones, some droppes of blood are thrust out. And thus much shall suffice touching the method and waie to cure the bones fractured, now will I speake in like sort of luxations and dislocations.

What a luxation or dislocation is, and of their differences. Chap. 6.

Older ever requireth, that whatsoever anie doe take in hand, that first or he proceedeth further, he do exactly know the nature of the same, which he cannot do otherwise than by definition & description. Therefore a luxation is the going out of a ioynt from his naturall place, whereby the voluntarie motion of the member is hindered, the Grecians do name this affection Exarthrema. There are two onely differences of luxations, which are taken according to the bignesse of the luxation, for if the ioynt be quite out of his socket & place, then it is properlie called a luxation, but if it be but onely a little remoued, it is then not named a luxation, but a wrych, in Latine Subluxatio, and Pararthrema in Greeke. It so happeneth that a ioynt may be sore manner of
waleg

waies dislocated, or luxated, that is to say, forward, backward, higher & lower, except in that which cannot be put out of their place, or else but one or two of these waies. But for as much as there riseth no great difficulty by numbering of such ioynts, I will leane off to make mention, & will intreat of the reducing of ioynts dislocated into their proper places. And to this there are foure intentions to be obserued. The first to bring the ioynt into his native and pdestinate place. The second is, the conseruation and keeping the ioynt so put in, that it doth not slip out againe. The third is, to defend the member from accidents, as dolour, inflammation, fluxe of humours, and such like. The last scope is, to put away those accidents if anye doe follow these in their proper places. I will set out, beginning with the first intention.

How the luxated ioynt is to be reduced to his naturall seate and place. Chap. 7.

Seeing that the ioynt dislocated and out of his naturall place requireth the reducing againe of the same into his wonted seate, you shall extend the member into diuerse parts decently, as is required, vntill such time as y space betwixt both bones is emptie and boide. Then the bone which is out of his place is to be put into the contrarie part from y whereas he is so placed in his native seate, that y emptines of the socket may againe be filled with the bone. But this extention and stretching out of the member must be done tenderly, & with so little paine as is possible. Neither is there one way of extending & stretching out of y luxated member, for sometime it must be done with the hands onlie, sometime with bands, and sometime with instruments apt and convenient for the same, as appeareth in Hippocrates booke de luxatis & fractis.

How the member luxated and brought in his naturall place, may be conserued and kept in the same. Chap. 8.

Vhen as the member luxated is brought into his naturall place, you must with al diligence possible labour

The fourth Booke of

to confirme the part, & keepe the member from slipping out againe, wherefore you shall anoint the place with oyle of roses, and then a fine and olde linnen cloth wet also in oyle of roses, shall be applied to the member, which done, you shall vse flufes and clothes wet in the white of egges, & lay them also on the ioynt. Last, you shall wet your rollers in water & vineger mired together, & roll the member therewith. And if necessitie both require, you may furthemoze make spléts of leather or pasted paper, & apply them about the ioynt, but giue diligence least the part be too straight bound & rolled, for feare of inflammation. These things thus finished, lay the member in his naturall figure & shape. Neither shall you, (except some great & ill accident happē) lose the roller & open the member, before the seuenth or tenth daie at the least. Auicenn willethe that in this case you shall not vse hot clothes or medicines for feare of fluxe and inflammation, but rather some refrigeratiue cerote.

How to defend the member from accidents, and
to put them awaie if they happen.
Chap. 9.

The member luxated being reduced to his naturall place, and confirmed in the same, and also hauing his perfect shape & figure, there remaineth to defend the same from ill accidents, or if such happen or thou bee called to the cure, to put them awaie. In the defending the member, you shall labour to keepe the member frō fluxe of humours, for if there be a fluxe, then shall there follow both dolour & inflammation. Therefore strengthen the member with apt & conuenient medicines set out in diuerse part of the worke. Also let him vse thin and small diet, purging, and letting blood, for these doe meruailouslie auert the fluxe from the affected member. But if it chance y there is already accidents or thou come to the patient, as dolour or inflammation, then thou shalt not put the member luxated into y place before thou halt cured the accidents. Wherefore these things sufficientlie declared as much as the nature of an Chirurgeon requireth, touching the

The methodicall curing of wounds, both in limber and instrumentall members, also of fractures and dislocations, I will speake briefly, taken of members, and then cease my penne for this present.

The method & way how to take of a member when it is mortified and dead: & of a new powder by me deuised, to stay the flux of blood. Cap. x.

It happeneth often tymes, that through great accidents which falleth vnto wounds, thorough gunshot, that the whole member cometh to mortification. So that of necessity it must be taken away. The same accidents also I haue knowen to chaunce vnto fractured members: and many other wayes it hath happened the members to come to Gangrena and Sphacelus, by diseases of which, you shall finde in other of my workes, a more ample discourse, wher as I intreate properly of those griefes. But for that my whole intention at this present, is onely to set out the way how to take of corrupt and mortified members, I will leaue them, and goe to my purpose.

If the legge chaunce to come to such corruption, beneath the knee, that of necessity you are constrained to take it of from the other part: It is best to cut it of, one good hande bredth beneath the knee. So shall the partie haue a resting place for a styt to goe vppon: And although it needeth no more but to take of his foote onely, yet for as much as the rest of his legge should be but a trouble vnto him. It is better to take it of vnder the knee, as I haue saide before, for the paine will be all one, and the daunger is least in that place. And further you must take diligent heede, that you make your incision aboue the corrupted parts, for else the flesh or bones being corrupted aboue the place wher as you make your incision might cause you to haue a new work, to the great grieve and paine of the patient, as I haue sene often times. And therefore if the corruption haue taken the ioynt of the knee, so that it cannot be cured, but that of force

the member that he amputated and cut off, then take it off
 three fingers above the knee. For in any wise take it not off
 in the middle of the knee, for that is very dangerous, and
 contrarie to the opinions of all the auncient writers: and
 that order you obserue in taking of the leg, the same shall
 you follow in taking of the arme. But before you beginne
 this worke, you ought well to consider with your selfe, and
 also to call other expert men to you, to see the patient, con-
 sulting with them, whether there be any waye to keepe on
 the member, & to cure it by any way possible, for it is great
 slander to the arte of Chirurgerie, and also matter in consci-
 ence, to take away any member, which otherwise might by
 arte be cured, although it be both painefull and long or it be
 done. But if ther be no other way but that you are constrain-
 ed to take away the member, or else the partie cannot be
 cured, and that in processe of time death must follow, then
 it is better to cut of a leg or arme, then all the whole bodie
 should perish. Now when you intend to take of a leg or an
 arme, first prepare the bodie, that is to say, if it be full of ill
 humours to purge it with conuenient medicines, and also to
 giue the patient such diet before, as is conuenient. That is,
 if the patient be feeble and weake, and hath bene long sicke,
 then giue him meates of good nourishment, to make him strong
 that he may be the more able to suffer the paine when as
 he shalbe dismembred, least he faint and fall into swooning,
 and thus doing five or sixe daies, you may proceed to the ta-
 king off of the member, which is done in this maner: first
 you shall make a defensitiue as heareafter followeth.

Rec. Boli armeni. viij. vnces. Farine hordei. iij. vnces. San-
 guinis draconis, Terræ Sigillatæ, Ana. ij. vnces. Olibani. i. vnce
 and a halfe. Aceti. iij. vnces. Albuminis ouorum. q. s.

Make all these in powder, that are to be made in pou-
 der, and incorporate them with the vinegar, and whites of
 Egges. Then spread this upon a cloth. iiii. fingers brode, that
 it may goe two or three times about the member. This de-
 fensitiue must be layde on so nere about where as you will
 take of the member, as is possible, so that when you make
 your incision, you must cut so nre this defensitiue, as with

In the breadth of one straw, or halfe an ynce at the furdest. This defensive must be verie hard rolled about the member, the night before you intend to take it off, and the harder it is rolled, the better it is, for the hard rolling staleth the blood, and maketh that in taking off the member there commeth no great flux.

And furthermore, by reason of the hard rolling, it letteth both the animall and vitall spirits, to passe to the affected parte, by meanes whereof, it is so astonished, that the patient feeleth not halfe so much paine, as he should if this were not done. Then when as you come to take off the member, you shall prepare all things readie that serueth for his dressing, and before you make anie incision, put the partie in verie good comfort, declaring vnto him, that the feare is much more then the paine. And if you be disposed to take off anie member without actuall cauterization, you may aptly doe it, by potentiall Cauterization.

Among which I haue deuised one that by continual professe I haue found profitable, and therefore I will shew the composition as followeth.

Rec. Aluminis succarini, Thuris, Arsenici, Ana. ij. vnces.
Calcis viui. vi. vnces.

Make them all in fine powder, and put vnto them one pint of strong vinger, and boile them on the fire, continually stirring it till the vinegar be consumed, then let it be set in an oven, or in the Sunne, till it be perfectly drie, that you may make it in powder, and when you will vse it, take of this powder iii. ounces, of Bole armoniack, halfe an vnc. of Pulvis Alcamislicus, i. 3. Put all these together, and make them in verie fine powder, and so you haue the powder sublimed and prepared to restraine blood when you will take off a member without hot yrons. And this medicine I haue found to be most sure of all other, not onely in taking off of members, but in manie other griefes cured by the arte of Chirurgerie, and I haue named it in all my Bookes, Puluerem secretum.

And before that you doe make your Incision, take foure ounces of this powder, and incorporate it with the whites

The fourth Booke of

Whites of Egges, then make a stufe of tow, as large as the ende of the member that you will take of, and dippe it in vinegar and presse it out againe. Then sprede your medicine, made with the powder & the white of Egges, open the same tow, after strow a little of this drye powder vppon that, so making many little bolsters of tow, to lay vpon this great stufe, as neede dothe require, for the better restraining the flure of blood.

Now when you haue all things prepared, with bolsters and rollers, and other things thereto pertaining, you shall goe to the patient and comfort him, as I haue sayde before, couering his eyes and setting him in some place conuenient, hauing certaine persons meete for the same purpose, to hold his bodie and his armes, that he let not your operation, and other apt persons to hold the member that you will take away. You shal then quickly and redily with a sharp incision knife, cut the flesh round about to y bone, within half an ynch of the defensiuē, that was before layde on. And one thing you must take hede of, there lyeth a nerue betwixt the two bones of the legge beneth the knée, which you must cut a sunder with your incision knife, least that in sawing of the bones, (this being not cut a sunder with your incision knife as I saide before) it might be so plucked and torne with the sawe, prouoking great accidentes, as sincope, spasmus, dolour, yea, and death also, which I my selfe haue often times sene.

Then when you haue made your incision perfect, with a fine sawe you shall cut a sunder the bones speedely, & with as little shaking of the member as you may, then lay vpon the ends of the bones a little lint dipped in oyle of Roses, & so wong out againe, the oyle being first made warme. And next lay on your stufe prepared, as I haue said before, with your powder, and the white of Egges, laying vppon that other stufes and bolsters, to restraine blood, as you see cause: then must you roll it according to arte, to keepe on the stufe verie close, that it may the better restraine blood. Provided alwaies, that ye laye a defensiuē above the knée, to defend that no humours fall downe to y same place, which

defensiuē you shall euery day keepe wet, with vineger and water. So that you shall not neede often to remoue it. In lyke maner you must wet your first defensiuē that was laid vnder the knē and so keepe it wet, for the space of sixe or seuen dayes befoze you remoue it. And for as much as we cannot come to a finger, or a toe to take it of with a saw, as we may doe a legge or an arme, therefore I haue deuised pinsons to nippe the bone a sunder after that you haue cut the fleshe round about to the bone, with your incision knife, vsing your pouder with the white of an Egge, for the restoring of bloud, and other defensiuēs, to defend humors, as I haue befoze alleaged.

Now for the rest of the cure, first we must procede with medicines to cause the alker to fall of, and I haue founde none better then this following.

Rec. Terebinthinæ, ij. vnces. Butiri recentis, iij. vnces. Cert one vnce and a halfe. Vnguent. populcon. viij. vnces.

Make hereof an vnguent according to art. This vnguent doth not onely loose the alker, but it cealeth the great paine, and kepeth the member from euill accidents which is requisite in this maner of cure. I haue not knowen two dye, that hath had their legges or armes taken of with this pouder aforesayd, & vsing the methode or way that I haue here befoze declared. And for the rest of the cure, you may vse medicines incarnatiue and desiccatiue, as you doe vse in other woundes, and as is required in the arte of Chirurgerie. Now my brethren, for as much as that the taking off, of members, is one of the principall things that you haue desired of mee, and to doe it without actual cauterising yrons, which soze feared the people with the erroze of cauterizatiō or burning, as we call it, that many of them rather would dye with the member on, then to abide the terrible fire, by meanes whereof, many people perished.

And other some that put themselues to surgerie and had their legges or armes taken of with hot yrons, many of the perished, as you your selues knoweth right well. And specially you that be of the Hospitales of London: wherefore I haue deuised and compiled (by the merciful helpe of God).

God) this manner and way to cure those miserable afflicted people, without any hot yrons or great perill of death, as you your selues haue had experience now of late time, by the dismembryng and taking off, of many members, to the great relæse and cōfort of the poore people, and to the great honour of the noble arte of Chirurgerie. And I trust also, being thus maintained, it shalbe highly to y^e glorie of God to the commendacions of this noble Citie, where as these charitable deedes are done, vnto the poore afflicted members of Iesus Christ, in the Hospitals of London, where as dayly these workes of mercie are done.

Now bretheren I haue opened vnto you this noble powder, which I haue inuented to your honour and profit, but chiefly for the commoditie of the poore: requiring you, for as much as it hath bene your owne desire, to haue the making of it, to take it in good part & giue God the chiefe maker thereof, thanks therefoze, and vse it well. For I haue hard say of a late time, that there is some that saith, they haue the same powder, and maketh a mocke and a gaude at it, going about to deface me the authoz thereof, for my good will and painefull diligence. But I warne thee (what so euer thou art that so saith) to hold thy tongue with shame, for neither thou nor I had it, but now of late time, inuented by me and one Maister Pierpont, and first put it in vse, and practise by the Surgions of Sainct Thomas Hospitall in Southwarke. And since that time put in vse of many moe, both young and olde, not onely in taking of members, but in restraining of bloud, bothe in veines and arteries, which could not be done with hot yrons, and many other things hath bene done with this powder, which is moze to be meruailed at, the to be beleued. And I for my part haue read no small number of authozs, and that of the best, and yet I neuer could finde this powder in any of them all. And if any other man be able to shew it mee in any other authoz, then I wil giue him place, or else holde thy tongue, as I haue said befoze, for if thou or any of vs all had had this powder, we had showed our selues euell members in a common wealth, that would suffer so many poore people to perish

rich in the Hospitals, and in many other places, for lacke of helpe.

And thus brethren to certifie your request, I haue finished this Chapter, and ended my booke called the Enchiridion, or a short and briefe manner of curing, as we call it, of wounds, fractures, and dislocations, &c. But for as much as the medicines therein contained, are put in the Latine tongue, peradventure you wil meruaile therat. Seeing that the rest is in the English tongue. But to you my brethren that exerciseth the noble art of Chirurgerie, I aunswere, I trust I haue done it both for your commoditie, and also for your profit.

There are two speciall causes why they are put in the Latine tongue, the firste cause is, for that we cannot aptly giue all those simples English names, and therefore for as much as hearbes and other simples, are called by diuers names, according to the vse of the country in our English tongue, that they grow in: therefore if I should haue put them in any of these Englishes aforesaid, an other parte of our countrie should not haue vnderstode it. And furthermore if I should haue put part in English and part in Latine, it should haue bene a defacing of all the whole composition of medicines. The second cause is, that I haue done it for your commoditie, for it shall cause you to vnderstande your receits or medicines in the Latine tongue, not onely by vse of compositions, but the simples also, for there is no medicine set forth in this booke, but if ye goe to any Potecarie, he will make it you presently, and declare vnto you euerie simple thereof, which shall cause thee in short time, if thou be diligent, to vnderstand the whole scope in making of medicines out of any Autho^r in the Latine tongue. And for you my brethren in London, this shall be to you a more commoditie, for it may moue you euerie lecture day, to put a question for one medicine. So that within short time, you shall gather the whole knowledge, both of simples and compounds, and also apte termes pertaining to the arte of Chirurgerie, in the Latine tongue, in which the most part of the arte is written.

And

The fourth booke of

And hereafter if God spare mee life, and this my simple woꝝkes taken in good parte, I shall not cease, but set forth vnto you one Verball, with the true pictures of herbes and trees, with manie other simples appertaining to the arte of Chirurgerie, with so many names, as well in English as in all other tongues that I can learne or vnderstand, with their vertues, properties, & places where they grow in. &c. Which booke may be such a doctrine, that you shall in short time vnderstand all these simples contained in this booke, and manie more, not onelie their qualities, but all their hidden properties which hath bene found out by long experience. And although this little booke named the Enchiridion, is verie brieue and short, yet shall you finde therein contained, a true and right methode of curing, according to bothe olde and new writers, with the whole scope and intentions curatiue, how to apply our medicines, when to apply them, to what place they ought to be applyed, and at what time. And although many Surgions haue good medicines that may serue for the lyke purposes, of these that I haue made mention of before, yet notwithstanding for an example I haue set forth these, that ye may the better vnderstand the true methode and way of curing, by the nature and operation of them.

Thus I take my leaue of you deare brethren in Iesus Christ, wishing vnto you the perfect knowledge of this noble arte, which is onely the gift of the holy Ghost, and you wel to vse it, that almighty God may worke with you to the comfort of the diseased or hurt persons: let vs all pray, Lord increase our knowledge, in all vertuous Artes and Science, that we may vse the, to the glory of God, to whom be all honour and praise world without ende. Amen.

¶ Thus endeth the fourth and last booke of the Enchiridion of Chirurgery, compiled by Thomas Gale Maister in Chirurgerie.

FINIS.

An excellent Treatise of

Wounds made with Gunshot, in which is confuted both
the grose error of Hierome Brunswicke, Iohn Vigo, Al-
fonse Ferrius, and others, in that they make the wound
venimous which commeth through the common
pouder & shot. And also there is set out a per-
fect and true methode of curing these
Woundes. By Iulie compiled and
published by Thomas Gale,
Maister in Chirurgie.

*By Iulie compiled and
published by Thomas Gale,
Maister in Chirurgie.
1525*

Microcosmos (whom Man we call)
of two right noble parts is made:
The Soule, whose life is eternall,
and bodie eke which hence must vade.

This last part, doth the first containe,
so long as it in health indure:
Vntill sicknesse and all her traine,
doth proclaime warre, and death procure.

Now sicknesse quite for to expell,
Apollo hath the arte out set:
What arte? loe Maister Gale doth tell,
whereby sicknesse force we may let.

The Canon shot (dreadfull and fell
like thunder bolts and fire flame)
How to remoue the waie, he tell
in this Treatise of worthie fame.

His name of right, Gale we may call,
for Gala, Milke doth signifie:
And as milke nourish aboue all,
so doth this Gale right perfectly.

His sugered milke of learning sweete,
doth the minde foster and feede :
Shewing the waie that is most meete,
Microcosmos to helpe at neede.

Now, what reward for him is due,
that for mans cause doth such things shew:
The wounded man shall be iudge true,
and learned heads which it doth know.

John Field Chirurgion.

Thomas Gale Maister in Chirurgerie, vnto the friendlie Readers.

I Am not ignorant (friendlie reader, but many, yea, & greater sort, will not a little increase, that I should go about to overthrow that, which for a manifest truth, of no small time hath bene receined and embraced, yea, and not onelie receined, but also with the pens of diuerse (otherwise well learned) confirmed and established. He thinkes I heare them saie, What kinde of fellowe is this? What a Paradoxe hath he published? Is his knowledge and experience passing those famous writers & haue left so noble works behind them? To all which I answer, that the matter must be tried, iudged, and determined, not by antiquitie onelie, nor by authoritie, but by reason and truth. And yet I will attribute as much to their authorities as some other wil, knowing my selfe far vnable to match with any of the. And also they be such as I haue profited by, yet the truth is to be preferred before their authorities. Wherefore I beseech the louing Reader, not to condemne mee before thou hast read my worke, and way, so the force of my arguments, wherewith I do maintaine my

my assertion, and conferre them indifferentlie with my aduersaries, and let the touchstone be Ratio et Experientia, so I doe not mistrust, but at the length this my opinion shall not seeme so straunge and new, as true and worthie to bee receined of other. Thus I bid thee well to fare, and fauour my doinges (which for thy sake I take in hand) as I wish thy knowledge in this my profession. At my house in London the 26. daie of Iulie. 1586.

The Proposition or Thema.

The vsuall Gun-powder is not venimous, neither the shot of such hotnesse as is able to warme the flesh, much lesse to make an askar. Chap. I.



Before I doe anie thing intreate of the cure of these wounds with Gunne shot, I will somewhat search out the nature of the vsuall powder and shot, whome many Chirurgions (otherwise learned) haue affirmed to be venimous, & so consequentlie the wound made with that powder and shot, to haue the cure of venimed wounds. And here I would no man should iudge that I denie there may be Gun powder venimous, but my talke shall not further extend than to the vsuall Powder made of Sulphure, Saltpetre, & Coale. And that the thing following may bee the more euident and plaine, it is requisite to consider what that is which is called venime, what the vsuall Gunne powder is, and what the shot vziuen violentlie forth with the Powder can doe.

As touching the first, what venime or poison should bee, (which is called in Latine Venenum, and in Greeke Pharmacon, it is no other thing than Res non naturalis, a thing

I.ii.

not

A Treatise of Gunshot.

not naturall, which being applied to mans bodie ante kind of waie, either inwardlie or outwardlie, through his maligne qualitie, propertie, or both, doth corrupt and destroye the same. Now then seeing you knowe what venim is, let vs diligentlie consider whether the vsuall Gunne powder doth aunswere to this definition, if not, then certainly it is not venimous, as diuerse persons haue hether to dreamed. And for because it is compounded of simples (Sulphure, Saltpeeter, & coale) it is requisite to set out what these three are, for so shall we the more assuredly coniecture what the compound is, and whether it be venimous or not. And here in for the perfect knowledge of these simples, we will resort onely to the authorities of Dioscorides and Galen, the principall writers of this matter, least in rehearsing all the authorities of those which write of the nature of simples, the worke might growe greater than I haue determined. Then if these writers founour our opinion, we will further wade and consider what daylie experience sayth hereto, or whether that there resulte a venime, the simples being mixed, or else that through alteration in time of the shotte, it tourneth to venime. I thinke these be the principall argumentes they haue to maintaine their fond fantasie.

And now touching the authoritie of the auncient writers, I will beginne with Dioscorides, who in his first booke lxxiii. Chapter, writeth of Sulphure in this manner. Sulphure viue is thought the best, which is called Apyron, shining lyke a glowe worme, and nothing stonie. And in generall, that Sulphure is allowed which hath not tasted of fire, waring greene and fat. There is greete store of it growing in Melo and Lipara. The foresayde Sulphure doth heate, dissolue, and concoct speedelie. It is good against the cough, short breath, and purulent excretion, taken in an Egge, or vsing the fume of it. And the sauer of the same burnt, bringeth out the childe in birth time: it doeth take awaie Leprie, Mentagra, and Scabrous vngues, mixed with Turpentine: but tempered with Vineger it is of force against the Leprie, and taketh awaie Vitiliginem, it healeth the

The sting of the Scorpion, Resine being put to it. And with vineger it is good both against the woundes of Draconis Marini, and also of the Scorpion, with salt Peter it taketh awaie the itching of the bodie, it helpeth the Fandies sprinkled on his forehead, or else taken in a rere Egge, it profiteth much in distillation, and stayeth sweating, with water and salt Peter it is good for those which haue the gout, the member being washed in the same. It helpeth the thicknesse or rather difficultie of hearing, & some of it being receiued by some hollowe pipe: it raiseth those which are called Lethargos, it stayeth the fluxe of bloud. Bruised Cares being annointed with it, mixed with Wine and Honie, are by it cured. These bee the wordes of Dioscorides touching Sulphure. His minde in effect concerning Saltpeter, in the fifth booke, lxxxix. Chapter are these. Pitrum is y^e best which is light, of rose or white colour, full of holes like to a Spunge, such is brought from Bunys. It bringeth out humours fixed in the deepe partes. The spume of Pitre is iudged best, which is most light, friable, in colour almost Purple, or spumous and biting, such is brought out of Philadelphia in Lidia. The second of Aegypt. Also in Magnesia. Both Pitrum and eake his spume, hath the strength and vition of Salt.

Furthermore, Pitrum helpeth y^e Collike if it bee taken with Cummin in Hydromell, or new Wine boiled, or any thing which doth loosen winde, as Rue or Dill. It is also v^sed in Feauers, to annoint them befoze the fitte suspected. It is mixed with emplaysters, which doe extract and dissolve, it doeth extenuate and put awaie the Leprie, with warme water or Wine, it doth awaie the noise of the eares, inflations, and perulentnesse, the filthinesse of the same it doth purge and cleanse, tempered with Vineger instilled and put in, it helpeth the biting of Dogges put with the grease of an Ase or Swine, it doeth open Felons mixed with Resine, Terebentine, and in the Dropsie, rubbing the skinne with a Figge, it causeth cleerenesse of sight tempered with Honie, and the venime of Bushrumpes beinge drunke with Posca, or else with water, if they haue bene

A Treatise of Gunshot.

bitten with *Uupressis*. Also to those which haue drunke Bulls bloud with *Laserpitium*, and it is to be giuen also to them which cannot taste their meat. It is vsed also in *Opisthotinis remissioribus et luxatis cum cerato*, and in resolution of the tongue mixed with bread. Some doe burne it on the coales, putting vnder a new tesse or pot vntill it waxe red hot. Thus much also out of *Dioscorides* touching *Pitru*. Now let vs heare *Galen*, who speaketh of Sulphure in this manner.

All kindes of Sulphure (saith he) hath a power attractive, and is of hot temperament, and of subtile substance, insomuch as it resisteth y poison of many venomous beasts, for I oftentimes vsed it against the venime of *Turtur marinus* and *Draco*. And when I had taught it certaine *Fischermen*, I after a short time returning, they mervailously commended this medicine to mee. The vse of it is, that being dried, strowed on the wound, and also tempered with spittle, for when I had cogitated these things, I found the true by experience. In like sort it serueth being mixed with vrine, for I taught the *Fishers* such medicines as might readily be prepared, and I saide they might aptly vse it both with olde Oyle and Honie, and Turpentine, and surely experience shewed all these so to be. Also I haue not a few times (with this medicine of Sulphure mixed with Turpentine) healed Scabs, *Pentagra*, and Leprie, for it cleanseth all such diseases, and doeth not repell them into the inward parts, whereas diuerse other medicines which cureth these sicknesses haue a mixed propertie, that is to saie, they doe both digest and also driue backe. Hetherto *Galen* of Sulphure.

Now let vs heare him of *Pitrum*, called with vs usuallye *Saltpeeter*. *Pitrum* (saith he) is in a meane in strength, betwixt *Aphronitrum* and Salt, but being combust, it goeth nearer the nature of *Aphronitrum*, for by vision it is made of more subtile and thin partes. Therefore it doth drye and digest. And if it be taken inwardly, it doth cut and extenuate grosse and thicke humours, much more than Salt: *Aphronitrum*, except great necessitie inforceth, is not to be taken

taken inwardlie, because it hurteth the stomacke, and doeth extenuate more than Pitrum. Trulie a certaine rusticall man vled Pitrum as a remedie against suffocation or cheaking, when anie had eaten Mushrumpes (they call them in Latine Fungos) and it euer profited him. And I my selfe haue accustomed to vse Pitrum both combust an crude, and chicke the spume of it in the like effects. Thus much out of Galen also, touching the qualities of Pitrum.

The like words both of Sulphure & Pitrum hath Aetius well nere. Now by their authorities you may easilie iudge that neither of these two are corrupters of mannes bodie, either inwardlie taken, or else outwardlie applied. So that they nothing agræ with the definition of venime. Vea Dioscorides, Galen, and Aetius, found Sulphure and Pitrum so farre from anie venomous qualitie, that they vled them as approued and excellent medicines against venime. Therefore neither Iohn de Vigo, Alphonce, nor Brunswicke, shall be able by anie approued autho, olde or new, to proue that the Simples (entering into the composition of the vsuall powder,) are venomous, except they will affirme the Coale to be venime, which were too ridiculous, seeing that women with childe, or those which labour with that sicknesse which is called Pica, and also children daillie cate Coales without daunger.

Furthermore, daillie experience sheweth the vse of Sulphure to be profitable. For it is a common practise, to giue it in milke to children vexed with wormes. And as for gunpowder it selfe, in defect of other medicines, I haue put of it in these wounds, to drie and ericate, to the great comfort of the patient. And therefore it is not in mixture and composition venomous, but medicinable, and hath in him the vertues absterſiue and desiccatiue. Neither in those that are wounded with shot of this powder doe you see anie of those accidents to followe, which are as inseperable in venomous shot. Although Alphonsus Ferrius woulde that putrefaction, corrosion, blceration, and corruption, shoulde be the proper accidents in venomous wounds. As who shoulde

A Treatise of Gunshot.

saie, that perspiration letteth of hotte and moyst humours, there followeth not putrefaction, or that there appeared not in vlcers corosion, called therof Vlcera Phagedenica. How aptlie therefore doth he applie these as proper accidents in venimed woundes, when they are found in moze than an hundreded diseases, I doe make himselfe iudge. Furthermore, the cure it selfe of these woundes, agreeth with those that bee confused and brused, without the addition of anie medicine or Aleripharinacon against venim, yea, & Alfonso himselfe did little consider his assertion, when in the curation of woundes made with Gunne shot, hee forgetteth to vse remedies against venime, which shoulde bee his chiefe and first scope, if the wound were as he affirmeth. So that it is moze cleere than middaie, that the powder doeth not receiue anie venime through the fire in shooting, and that also it is euident in those that are burnt with Powder, for there appeareth no mention of venim in them. And the burning is easilie cured, and that with light medicines. Another argument that Alfonso bringeth is, that the compound medicine commeth to the fourth degree in heate, and therefore is venimous, and so consequentlie the shotte, and therefore the wound with it made. But let vs see I praie you the force of this argument: Sulphure is hot in the fourth degree, and Saltpeter hot in the end of the second degree. Now in the composition there is put one part of Sulphure, ten partes of Saltpeter, and one parte of coale, the coale is colde and drie, and therefore addeth not heate to the composition, neither the ten partes of Nitrum, being but in the second degree hot. How then shoulde this powder bee hot in the fourth degree? As for the like example, if you put to one part of boiling water, ten parts of water but halfe so hotte, will it abate the heate of the one parte, or make it greater? I suppose none is so rude to confesse that it will increase the hotnesse of the one part. But in the waie of disputation I will graunt this absurditie. What then? Will hee conclude all things that are in the fourth degree hotte, to bee therefore venimous? Then surelie hotte yron, fire,

Fire, burning coles, Pepper, Bellitorie, and a great number of healthfull simples, should be numbred among venomes. True it is that venomes are deadly in themselves. But it doth not therefore follow, that what so is deadly, that same is also venemous, this is no true conuersion. But leauing this as a thing to manifest, to make more wordes of: we will consider whether the shot receiue such heat, that it can make an asker in the wound, as they affirme. Surely, I in the warres, haue asked diuers wounded Souldiers, what heate they perceiued in the time of the pearcing of the shot? Who all answered, they felt no heate, but a certaine confusion, and I my selfe haue presently taken vp the Bellet when it hath falne at the marke, and felt no heat at all to be made account of. But that you shall perfectly vnderstand and be Iudge your selfe in this case. Hang a bagge full of Gouppouder on a place couenient, and stand so far of as your peece wil shoote leauel, and shoote at the same, and you shall see the Gunpowder to be no more set on fier with the heate of the stone, then if you cast a cold stone at it. But say they, how happeneth it the that there is an asker in such wounds? For there is neuer asker but cometh of cauterization, either actuall or potentiall. To this I answer, that it is no asker, for then it were not possible there should be flure of blood in these wounds. For Galen saith, things adurent and burning, doth stay and staunch blood.

But you will reply and saye, there cometh no great flure of blood: to which I answer, the cause of that is, the great confusion which repelleth the blood, and hath so dreyed the part wounded, in thrusting the blood to the other parts that there is the lesse flure. But this is most euident, that there euer followeth flure more or lesse: and therefore it is no asker but confused flesh.

This might also be a reason manifest to the senses, that if the pellet be a cauterise (which of force it must be, if it doe make an asker) how happeneth it, that it burneth not garments when it perleth them first, and then the bodie? Nay you shall neither see, neither smell any token of adustion or burning: where as if the shot had no more heate then a

A Treatise of Gunshot.

little sparke of fire; it should in lyke case easely burne the garments.

But I thinke these arguments sufficient. Therefore seeing that neither by authoritie of any learned author, neither by experience, neither yet in composition and mixture, and to conclude, neither in the shooting the vsual gunpowder is found to haue any venemous qualitie, or the shotte any such heate as is able to make an asker: Let them cease (I pray them) hencefoorth, their fond opinion, & not obstinately persist in their error conceiued, seeing that the sences doth otherwise iudge: and not be ashamed to imbrace a truth, & from hencefoorth confesse the vsuall powder not venemous, nor the shotte of such heate that can make an asker. Which if they doe, they shall not be tormented with such care to take the fire (as they commonly call it) out of the wound. But considering that this wound made with gunshot, is to be numbred not among grene wounds, not among venemous, but onely among those which are called contused, brused, or crushed wounds: They shall with great gaine to the wounded man, and much profit and fame to themselves, haue as prosperous successe in their cures, as some of them haue sustained shame and reproch. But now to the generall cure of those wounds made with gunshot.

The generall methode and way to heale such wounds as are made with gunshot.

Cap. ii.

Now seeing (as I suppose) I haue sufficiently proued, neither the shot or powder to be venemous, it is conuenient to shew the methodicall cure of these kindes of wounds. And there are two intentions properly hereto belonging. The one is to deliuer the wound of all such things as are not agreeing to nature. The other is restoring of such things as are lost and perished. I call things not agreeing with nature, not onely shot, yron, splinter, or shiuers of wood, cloth, dust, oyle, or such lyke: But also the cloddes of blood, mattier, brused flesh, and such lyke as haue
no so

no societie with nature. The way how and in what sorte these thinges are to be remoued, you shall finde in the fifth Chapter of the first booke of my Enchiridion. The restozing of that which is lost, is properly the office of nature, as to ingender flesh, blood, and such lyke partes as are to be engendred. Notwithstanding the Chirurgion herein is Patures minister, and shall labour to bying the parte to his right temperature: And it so reduced to conserue it in the same estate.

And although in the sixte Chapter of my Eachiridion, I haue shewed a generall Methode of curinge contused wounds: yet I will not refuse for the helpe of the inexpert, to set out in this place a moze ample and large maner and way of working.

Therefore the cure of these kinde of woundes, is to remoue thinges fixed in the woundes with instrumentes thereto conuenient. As Crow billes, Gole billes, Terribilles, Pippers, or Tonges. And then to doe your indeuour to cure this wounde, as you would doe contused and brysed woundes.

And for because the brysed fleshe must of force be taken awaye, and that with so much expedition as you conueniently may, without sharpe and byting medicines: Therefore you shall to this wound contused take, of Precipitate Mercurie Dragme. j. Or according as you shal see cause, and mire it with simple oyle, or oyle of Roses, or with butter, or freshe Barowes grease, and laye it to the contused places.

Bartholomeus Maggius an excellent Chirurgiō, in these woundes, after the things fixed in, be remoued, the fluxe of blood stayed, and the wounde cleansed, vseth to put into the wound, of his oyle one drop, vnto which oyle he geueth great commendation, in all contused woundes, and the discription of it is as followeth.

Rec. Resinæ abietinæ. v. vnccs.

Olei Rosacei. ij. vnccs.

Sem. Hyppericonis. v. dragmes.

Sem. Momordicæ. iij. dragmes.

The

A Treatise of Gunshot.

The seeds shall be brused, and put in a double vessell, with the oyles, and let them boyle halfe an houre. Then straine them, and keepe them to thy vse. This oyle doth also swage dolour and paine, it doth concoct and digest, and preserueth the sound flesh from corruption and putrifaction. There are also other medicines apt and couenient for these wounds, but I will repeate one which is singuler, and as I might tearme it merueilous: for it separateth the confused swelling, and putrified flesh, and that without dolor or paine. And furthermore, it so concocteth and digesteth, that you shall not perceiue any kinde of cruditie in the wound, & this medicine is called Vnguentum Egiptiacum.

Wherefore I wish that the Surgion doeth both dippe his tents therein, and also lay it on his splegeantes. For in two daies or thre at the most, yea, in great confused wounds, it worketh his effect. And here by the way, I must put the Surgio in memozie, that his tents be not to bigge or long, that they be not rough and hard, for the bigge tent doth extend the member, the long doth pricke and induce dolour: the hard and rough, doth as it were teare the flesh.

Let the tentes and splegeantes therefore be made of olde and fine linnen cloth, that it bringeth not paine to the affected part. After the confused flesh is remoued by the vse of your Egiptiacum, then apply to the place things that wil mundifie, and moderately drye, as Honey of Roses tempered with the flower of Barley meale, or Beane flower, vnto which you may adde, Aristolochia rotunda, Centaurium minus, Euphorbium, Aloes, Turpentine, Frankensence, Plantaine in powder, or iuyce, flowers of Pomgranade, Cipresse nuts, and such lyke, according as the nature of the part, and time of the yeare doth require. And here I speake not either of purging, letting of blood, scarifying, & boring, more then to admonish them, that these are necessarie, & must of force be vsed in these wounds: bicause I would the Surgio should not rashly attempt herein any thing, for the great peril that may follow: but rather vse the discreete counsel of the learned Philition.

Neither in those wounds which are great, and perilous
with

shot, I would haue them straight waies to dismember the patient (as many rash Emperickes now in these daies vse to doe) except Sphacelous or Gangrena, haue vtterly mortified the part. For I my selfe haue cured a certaine Soldier who was shot with a base, through the thigh: & there was more then three fingers breadth taken awaye of the bone in length, with the shotte, and yet (God be thanked) through diligence and paine, the patient was restored to health: and hath the perfect vse of the legge, without any paine or grieve, more then that it is shorter then the other. And thus much touching wounds of Gunshot in generall. The rest where as the particuler cure varieth from the generall methode set out according to the part wounded, you shall haue in their proper places following.

Of a simple wound in the head, made with
Gounshot. Cap. iij.

In wounds made in the head with Gunshot, you shall diligently consider whether the wound be simple or that it be compound. For according to their diuersitie, the intentions curatiue doe much varie and change. And for bicause there may be these two kindes of wounds, I will senerallye of them entreate, beginning with a simple wound first. Therefore if the wound be simple, the cure is easier, and without danger: If that the patient haue not a bodie replete with euill humors, or haue tasted of that contagion, which Maister Doctour Cuninghame, in my iudgemēt, doth of all other most aptly giue to name, Chameleontiasis (vulgarlie it is called Morbus Gallicus) as appeareth by his booke written on the same. In which he sheweth the errors of such as haue hetherto heretofore written: and setteth out a most perfect methode & new way of curing, without fumes, Quaiacum, vnguents receiuing into their composition Hydragryzan, or such lyke. But now to that from whence we are digressed.

If the bodie of the wounded patient be affected as is aforesaide, although the wound be but small and simple, yet
most

A Treatise of Gunshot.

most trifling woundes in such bodies are not cured without much diligence. Wherefore in such bodies you must labour to purge the ill iuse, or in Chameleontias, both to let blood, purge, and sweate, and by dyet, and things convenient rectifie the bodie and principall members of the same. So shall the cure of the wound be moze speedie, and also prosperous. But now to the true cure of such wounds as are called simple. First let the haire be shaven round about, after apply this vnguent following.

Rec. Precipitati optimi. ij. dragmes. Butiri salis experti, Olei Rosarum. Ana dragme. j. se. Croci. ij. graines.

Mixe these and make an vnguent, which you shall laye on your splegants being made of soft linnen cloth, and apply it to the wound.

Then you shall laye on the wound also Bolus armenius, tempered with oyle of Roses and the white of an Egge, lyke an vnguent, to defend the part from accidents.

And this shall suffice for the first daye. You may also at the beginning, vse in steade of the seconde vnguent, this comfortable Cataplasme following.

Rec. Oleorum myrtillorum, Rosarum. Ana. ij. vnces. Baulasliarum, Rosarum rub. Ana. i. vnce. Boli armeni, Sanguinis draconis, Ana. j. dragme. Myrrhae halfe a dragme.

Make of all this a Cataplasme according to arte.

The second daye, you shall vse some medicine that bothe doeth digest, and also moderately dreye the wound, of which sort this is one.

Rec. Terebenthinae lotae, one vnce. Mellis Rosarum, two vnces. Butyri salis experti, three dragmes. Farinae hordei, Aristolochiae rotundae, Radicis ireos. Ana. j. dragme. Aloes, halfe a dragme.

Mixe these and make all in an vnguent, and vse this untill such time as there appeare signes of concoction in the wound, at which time you shall no moze vse butter in the vnguent, but in steade thereof, mixe with it this powder following.

Rec. Sarcocollae. j. dragme. Corticum Radicis papaveris, halfe a dragme, Farinae orobi, Myrrhae. Ana. dragme. i. semis.

Make

Make this in poudre, and temper it with the other vnguent. And vse this vntill the wound be perfectly cured. And this is the cure of a simple wound in the head.

Of wounds compound, which chaunce in
the head through shot,
Cap. iiii.

In the cure of compound wounds of the head, you must first of all (bicause you may the surer iudge and discern) vse incision and make Cranium bare: the forme of cutting most apt, is to make it in forme of two right lines crossing themselves in the midst.

After which incision made, you must with some instrument sharpe and flat, rayse the skinne and flesh from Cranium.

And if you see any shot or peece of bone, which may easily be taken out: you may doe it with some conuenient instrument.

But if it will not without difficultie be taken away, then wet your Supps in astringent wine and vinegar mixed with Bals armoniacke, and Sanguinis draconis: and lay it to the wound. The next day following you shall vse this receit next insuing foure or fve dayes, for feare of inflammation to follow.

Rec. Boli armeni. ij. vnces. Albumenu ouorum. 2. Olei Rosacei omphacitis. ij. vnces. Croci. ij. graines. misce.

Then you may very well vse this digestiue following, so long as shall be thought conuenient, and that vntil the thing fired will easely be taken out.

Rec. Terebinthinæ lotæ in vino. ij. vnces. Ouorum vitella. nu. ij. Olei Rosati. ij. vnces. Aloes. ij. scruples. Croci. iiii. graines misce.

In other things the cure of it doth not differ from the cure of simple wounds. But if any beine vnder Cranium be broken, and maketh effusion of bloud: If Dura mater, or Pia mater, be rent or torne, if Cranium be broken & thereby the braine is depressed, then you must with all expedition
set

A Treatise of Gunshot.

set a trappan on Cranium, and giue the wounde vent, and take out the blood or matter, or what else, doth trouble and depresse the braine.

And for because you may know perfectly, whether the brayne is hurte or not, (although your senses outwardly cannot discern any thing) note these signes following. If he haue vertiginem, or thinketh he seeth manie lights, if he haue alienation of minde, or swelling and tumour of the eyes with rednesse, or bleeding at the nostrelles or eares, also vomiting, resolution of some one parte, and Appoplexie. These be infallible signes that the braines suffer, when as they consequently follow after the head be wounded. And when you are constrained to vse a trappan, you shall make tentes of Cotton, Wolle, or lint, and put into his eares, and commaund a man to compresse with his hands the patients eares, least the noyse make him to much afraide, and faint hearted. And looke that you haue alway in readinesse, softe and fine clothes, wherewith you may mūdifie Cranium, and wype away the blood.

Then looke you haue a pæce of silke or scendal, auncwering to the opening of Cranium, well wet in auster & stip-ticke wine, or in oyle of Roses, if there doth appeare any cloddes of blood to lye vpon the pannicles, and put this silk vpon the pannicle, & with an instrument put it vnder Cranium. Then put stuphes made of the finest carded woll you can get, and wet them in oyle of Roses, and lay them on the place. After that, fill the rest of the wound with clothes dipt in the same wine and oyle, then with your hands thrust it out, & lay vpon the same cloth, Bole armoniacke mixed with the white of an Egge, and apply it vpon the same wound, and for to defend the member from dolour and inflammation, you shall laye round about the wound this medicine made of Mel rosaceum, Farina hordei, and Iris. And when the hole made in Cranium doth beginne to be filled with flesh, then with a raspatorie, take away the sharpe edges of the bones, and bzing the lips of the wound by little and little into their proper places.

And if through the negligence of the Chirurgion, or the
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ill habite and disposition of the patients bodie, or anie disorder of the temperature, there followeth corruption to anie part affected of the braine, then you must againe returne to the vse of precipitate, or Vnguentum Egyptiacum, which is most excellent in this case. And euer after the doctrine of Hippocrates and Galen, bee mindfull that thou worke softly, speedie, and with so little paines to the patient as possible you may. Wherefore handle the partes tenderlie, and wipe all filthie matter awaie. Let the rollinges onelie serue for to keepe on the medicines, wherefore let them not be too strait, and so to prouoke paine. Let the bellie be fluxible and loose by clisters, suppositoies, or purgation, if y it be not naturally soluble. And in this case you may giue the wounded patient euerie daie, or else euerie second daie, one pill of Agarike or Aloes. The diet must bee most small and slender from the time of the receiuing the wounde, vntill the seauenth daie. The meats shall be the broths made with a Chicken, the drinke shall be water boiled with Sugar, and a little Cinamon, or else small Ale & Beere. From the xi. or xiiii. daie you may giue him at meate a little French wine, or if the wine be too strong, mixe it with fountaine water, or water of Buglosse and Borage, his broths made as before, with chickens or Capon, and you maye thicken the broth with bread, with Almonds, or such like things that doe nourish. Notwithstanding let all be done with great discretion, and that the patient obserue his due houres of dinner & supper. Other things required for the order of 6. rerum non nat. Let the Chirurgion learne of the skilfull Physition.

Of wounds in the brest. Chap. 5.

Although the wounds made with Gun shot are in all partes of the bodie one in effect and grieve, yet doth the cure differ according to the place wounded. Which thing prouoketh mee to describe heere also the seuerall cure of woundes made in the brest. Wherefore if the wound in the brest pearceth not through, you shall cure it lyke other woundes. And the first two daies applie Vnguen-

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A Treatise of Gunshot.

tum ex præcipitato, or some other which hath the like facultie. And after that vse some medicines which will gentlie ericate and mundifie, as Mel rosarum simplex, or else mixed with Turpentine, Aristolochia, Farina hordei, and such like. And it shall be right good from the second daie vnto the fourth or fifth daie to put to your abstersiue medicines fresh and new Butter. So you may make your compound after this manner.

Rec. Mellis rosarum, j. ounce, Terebinthinæ, Butyri recentis, ana. ij. drams, Farinæ hordei, Aristol. rotundæ, ana. j. dram. Mixe these together, and dip your tents and splegeants in them. But vpon the wound you shall vse to laie this medicine following.

Rec. Album. vnius oui. Olei rosati, j. ounce, Boli armeni, j. ounce and a halfe, Misce.

But when as that matter doth begin to appeare in the wound, then in the stead of this last remembred, you shall vse Emplastrum ex Chacitide, vel Triapharmacon, made of Oxeleum and Argenti Spuma, spread on a linnen cloth, and layed on the wound, and when the wound is cleansed from superfluous humiditie, you shall cure the wound like those whereas wanteth some generation of flesh, wherefore for this intention dip your splegeants in this medicine, to whose composition is required.

Rec. Succu Myriophylli, Mellis rosati, Terebinthinæ, ana, one ounce, Farinæ fabarum, Hordei, ana, two dragmes and a halfe, Thuris, Aloes, Aristolochiæ rotundæ, ana, one dragme.

Mixe them together, and with a Rice Sirre these on the fire, vntill they be well incorporated, and reserue it to thy vse. Now if the pellet or shotte haue pearced the inward partes, it is deadly and mortall, both for breaking some bones in the breast or ribbes (for the pellet cannot pearce betwixt the ribbes without breaking of some of them, except the shot be small like haile shot,) and also for pearcing the inward partes. Notwithstanding where the pellet or shot moueth in the capacitie of the breast, you shall with a Probe handsomely bent for the vse, search where it is, and
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it being found, bring it vp to the orifice of the wound, and then with your Forcepes take it out, as also the bloud. This being done, you shall vse this vnguent following two daies onelic.

Rec. Olei rosati omphacitis, iij. dragmes, Terebinthinæ, j. dragme, Pulueris præcipitati, iiij. scruples.

Mixe all these well together, and dip your tent in it. But here you must take heed that the tent be made of most fine and soft linnen cloth, and that the length of the tent be no more than the thicknesse of the ribbes, neither the bignesse more than serueth the orifice of the wound. And vpon the wound you shall applie in manner of an Emplaster Bole armoniacke, the white of an egge, and oyle of Roses, vntill there appeare concoction in the wound, at which time you shall no more vse it, but in the place thereof you shall vse Emplastrum Barbarum, or else ex Chalcitide, whose compositions you shall finde in my Antidotarie. After the second daie you shall vse this vnguent.

Rec. Butyri recentis, ij. dragmes, Mellis rosati, halfe an vnce, Glutinis albotin, iij. dragmes, Aloes, Farinæ hordei, Ful. ireos, ana, j. dragme, Misce.

When as you haue vsed this medicine the space of eight daies, you shall leaue out the Butter, and in place thereof double the quantitie of Honie, and you may make an injection to mundifie the breast with water, in which is boiled Liquorice, Figges, Raisons, and the lesse Centaurie, or Lupines. The rest of the cure of these wounds doe not differ from the methode sette out in the second booke of my Enchiridion.

Of wounds with shot made in the third ventricle or bellie. Chap. 6.

THE wounds made with Gunne shot, if they be one, lie about the bellie or flankes, without pearcing thorough, and hurting the spine of the backe, are cured as other simple wounds made in the flesh. First taking out the shot, then to remoue the bused and contused flesh with

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A Treatise of Gunshot.

medicines conuenient, as you see set out in the curing of wounds of the head and breast. Then the third daie to vse some abstersiues, which also do somewhat ericcate and drie. But if the shot haue pearced through the bellie, and haue wounded either the stomacke, liuer, splene, kidneis, intestines, bladder, or anie of the greate veines or arteries, then there is no hope of life to be looked for. But if the shot haue pearced the bellie, and yet not wounded anie of the forenamed members, then the shot being taken out, there is some hope of recouerie, but yet the patient is not free from perill and daunger. Therfore you shall labour to get out the shot, placing the patient vpon the wound, and roll him from part to part, prouoking thereby the shot to come to the orifice of the wound, then with a probe made apt and conuenient for the same vse, take out the shot. But if so be that you cannot without great paine and much searching finde the shot, it is much better to let it remaine within, than with prouoking of moztall accidents labour the taking of it out. For there is no daunger in letting the shot remaine in, and there is great perill in long searching, for that the aire doth alter the inwarde partes, and in searching, some inward part maye be hurt with the Probe. I my selfe seruing at Muttrell, vnder the mightie and puissant Prince, Henrie the eight, about the yeare of Christs incarnation 1544. had the experience of eleauen sundrie souldiours shot into the bodie, without pearcing of anie inward member, and I could not get out the shotte without greate difficultie and making incision, and therefore I letting the shotte remaine within the bodie, did perfectlie cure the patients, and they liued long after without anie grieue or paine prouoked by the shotte.

In like manner about the yeare of Christ 1557. when as Philip king of Spaine besieged Saint Quintaines, I then seruing vnder him, had diuerse Souldiours in cure wounded in lyke sorte as is rehearsed, and the shotte still remaining in the bodie, they were (thanked be God) restored to health. I doe also now call to remembrance that there came a Souldiour to London, when I first practised the art

of Chirurgetie, who was shotte in the bellie at the siege of
 Pavia, and made perfectly whole, the pellet remaining with-
 in. This souldiour twelue yeares after he was thus cured,
 comming to the Citie, had a great Apostume in the flanke,
 I then among other being called to the cure, wee applyed
 such medicines to the Apostume, as we accustomed doe
 to Apostumes named Bubones, engendered in that parte.
 And when the Apostume brake and came to suppuration,
 we tooke out a pellet of Lead, and after did cure the blcer,
 and made the man whole. These I doe bring onelie for ex-
 amples sake, that other Chirurgions being in the warres
 should not too much busie themselves, or put the patient to
 paines and in daunger, in taking out the shot. But howe
 to that from whence we are digressed. The shot being ta-
 ken out (if it may easilie be done) the confused and brused
 flesh remoued, & the abstersiue medicines applied, you shall
 procede with incarnatiues and consolidatiues, as is set out
 in the cure of woundes of the bellie, in the second booke of
 my Enchiridion. And if bloud or mattier be in the bellie,
 vse wine warmed, and make injections. But how much the
 sooner thou doest haste the cure of the wounds in the belly,
 so much thou makest the patient surer of lyfe, and thy selfe
 of worshoppe of the cure. Thou mayst vse well in these
 woundes when neede shall require, this incarnatiue fol-
 lowing.

R. Thuris, Aloes, Farinae hordei, ana. j. dragme, Terebin-
 thinae, Mellis, Succu myriophylli, ana. ij. dragmes. You shall
 mire the flower with the iuyce, then dissolue and melt the
 honie and Turpentine at the fire, then put all together and
 make an vnguent. With this you shall spread your splegt-
 ants, and dip your tents in, & when the flesh doe grow well,
 and that the wound begin to be filled, you shall applie such
 medicines as are astringent & doth drie, as honie mixt with
 pouder and Baie berries, Mastike, flowers of Pomgranads,
 and Turpentine. And for an emplaister you may vse Em-
 plastrum Chalcitides, set out in the second booke of my An-
 tidotarie. You may not forget in these woundes of y bellie
 to open a veine in the arme on the same side, and command

A Treatise of Gunshot.

the Patient to vse quietnesse in bodie, and his perturbations and affections of the minde, so much as in him is possible.

Of the cure of wounds made with Gunshot in the partes called Artus, conteining the armes and legges.

Chap. 7.

The cure of such woundes as happeneth to the armes and legges, is after the method set out before. For first you shall (the wound being made in the fleshy parte) with your probe search out the shotte, and with your crowes bill take it out. But if it haue well nere pearced through the member, and that you maye feele it in the opposite part, then cut the place, and take out the shot, regarding alwaie that you cut none of the great veines which lieth toward the skinne, but if the shot cannot easilie be found, you may not therefore cease the cure of the wound, but procede in this manner.

If the holes of the shot doe differ and are distant, you shall roll fine lint together, and put it into the eye of your Probe made like an Needle, and drawe it through the wound. But if the muscles do not suffer this, then you shall instill and powze into the wound the vnguent made with Butter, Precipitate, and my Egyptiacum, (whose composition is in the Antidotarie) and let it pearce into the wound. Then you shall make tents and dippe them in the same, and put into the orifices of the wound, and upon the partes round about you shall applie the medicine made of oyle of Roses, Sole armoniacke, and the white of an egge mixed together. This medicine you shall so long vse, untill you be past suspicion of inflammation, and other accidentes. And when there appeare signes of concoction, you shall put but one parte of Butter, and two partes of Honie. After which thinges done, the vse of this medicine is convenient.

Rec. Succ. Apij, Myriophilli, Terebinthine, ana .j. ounce.
Mellis, .ij. ounces, Farina fabarum Hordei, ana .ij. dragmes. Aristolo-

Aristolochie rot. j. dragme and a halfe, Aloes, one dragme. Fitte
mire the pouders with the iuyces and honie on a softe fire,
then put in Turpentine. And in Summer, or whereas the
Patient is of cholarike nature, in the place of Apium you
may put the iyce of Plantaine, or if you will more speede
lie exiccate and drie, put to it Lithargirum made in most
fine poudre, or else lime washed manie times, and dried and
made in fine poudre. And when as the wound is well muni-
fied, you may vse some incarnatiue, as this for example.

Rec. Terebinthinæ. ij. ounces, Mellis. j. ounce, Aloes, Thu-
ris, Farinæ hordei, ana. j. dragme, Aristolochie, halfe a dragme.
And now you must haue regards to your tentes, that you
dailie make them shorter and lesser, and so cure the wound.
But if it happeneth that through the violence of the shotte,
not onelie the fleshie partes be wounded, but also the bones
fractured and broken, then you shall vse a double kinde of
cure. For the confusion must be cured as I haue here be-
fore made mention, and the bone fractured must be vnited
and vled as is set out at large in the fourth booke of my En-
chiridion. Sauing that you shall not vse ligatures & splents
in these kinde of wounds. But first you shal labour to take
out the shot, next to remoue the confused and brused flesh,
then to procure the generation of newe flesh. After which,
shall come the vnition of the bone. And because you maye
keepe the part without motion when as the bones are ioy-
ned, you shall vse the instrument for fractured legges. And
then couer the member with soft clothes, that it may be de-
fended from the iniurie of the aire.

Of the cure of those that are burnt with Gunne pou-
der. Chap. 8.

The cure of those that are burnt with Gun powder,
doe require none other cure than if they were burnt
with fire, or other flames. Wherefore it were super-
fluous to make mention of y^e cure of it in this place.

A Treatise of Gunshot.

if it were not that those which vse shooting in guns are subiect to the flame of powder, & therfore I haue placed it with this booke. Wherefore if the skinne be not yet vlcerate, you shall applie to the parte oyle of bitter Almondes, oyle of Onions with salt, or that which is in common vse, to take two partes of the iuyce of Onions, and one part of barnish. But if there be vlcérations, then you must make this vnguent following.

Rec. Olei oliuarum. ij. pound, Secundæ corticis Sambuci, iiij. ounces. Boile these on the fire, then straine them strongly, after adde to them, Cerussæ halfe an ounce, Plumbi vsti, Lithargiri, ana. iiij. dragmes. Dire these with a Leaden pestel in a mortar, and make thereof a liniment according to art. But you must take heed that you open not the bladders for the space of two or thre daies, for when as they are opened, at the beginning they bring dolour and paine. The inflammation ceased, and the accidents which maye happen being put a waie, the rest of the cure is as the cure of vlcers, which varieth according as the vlcer is simple or compound.

Thus endeth the Treatise of Gunshot, compiled and published by Thomas Gale, Maister in Chirurgerie.

F I N I S.

An Antidotarie conteining

hid and secret Medicines, simple and compound : as also
all such as are required in Chirurgerie : faithfully
gathered and published, by Thomas
Gale, Maister in Chirurgerie.

Antidotarie.

WHy with so coy, and strange a looke,
dost thou me thus beholde?

Am I vnknownen vnto thy sect,
or my vse manyfold?

Chirurgion.

Where as acquainted men be not,
what should they faune and smile?

I know you not my lookes it shew,
I will you not beguile.

Antidotarie.

My Maister hath sent me abroad,
to his great cost and paine :

Willing me with Surgions to dwell,
to their worship and gaine.

If that but once my name you heare,
you will me know certaine,

ANTIDOTARIE cald I am,
which great treasures containe.

Chirurgerie.

Antidotarie should I know,

but thy speech, and aray,

(Which yet I haue not hard or scene)

doth the contrary say.

Antidotarie.

In deede I was naked and bare,

with errors eke infect,

And barbarous names of medicines,

to which I was subiect.

K.v.

But

But lo, I am now garnished,
with medicines of price.

Which olde Hippocrates did vse,

and Galen did deuise,

Anicen, Rasis, Mesue,

Guido, Brunswike, Vigo.

And all my Maisters trauailes eke,

he hath added me to.

And though my speach for want of vse,

seemth somewhat strange to thee,

Yet if learning thou wilt imbrace,

and acquaint thee with me,

Familier thou shalt me finde,

casie to entertaine.

Chirurgion.

Then giue me leaue thee to imbrace,

do thou with me remaine,

And for thy sake I will not spare,

labour and tyme to spend.

Antidotarie.

If thou so doe, great gaine will spring,

and men will thee commend.

W. Cuningham.

Thomas Gale Chirurgion,

vnto the friendly Readers, salutations.

When as I had finished my Institutions, Enchiridion, and Treatise of woundes made with Gunshot, (louing Reader) I dyd right well perceiue that the precepts of the art in them contained, should not so farre extend and serue so wel thy vse, except I dyd set out such medicinal instruments, as both are mentioned in the same booke, and of necessitie are required in the art of Chirurgerie: as Unguents, Dyles, Baulmes, Lotions, wound Drinckes, Emplaisters, Ceysts, cataplasmes, Trochisce, pouders,

ders, and such lyke. For although I haue set out diuers approued medicines in other my woorkes, yet they be but as an handfull in comparison to this Antidotarie, and put forth there onely for exāple sake. Wherefore I haue drawen out of the most approued authoꝝ olde and new, such medicines as be both easilie prepared, and of most effect and vertue, adding heere to what I haue found profitable and necessarie by long experience and practise. And although perchance at the first it may seeme somewhat obscure and hard) because I put the recepts and compositions in the latine tongue) yet if you doe accustomably vse to reade them, and conferre either with the Apothecarie, wher as you doe not perfectly vnderstand the same, or else vse the helpe of a Dictionarie, they will be vnto you bothe familiar & plaine. And thinke not that I haue done this (louing Reader) because I would make it more hard and difficult: But I did it chiefly for that the latine names are vniuersally vsed, and that there are an infinit nūber of simples which want English names, and those (for the more part) that may be Englished, are not vniuersally knowne through England by that same name, because of the diuersitie that is vsed in calling of simples, according to the countrey. And yet I doe not omit to set out in the English tongue, as well the methode and way of composition of such medicines, as I haue placed in this Antidotarie, as also faithfully declared their vertues and vse, for what causes they are inuented, and for what infirmities they serue.

And although it seeme hard, obscure, and difficult at the first face, yet follow thou still the counsell of the wise Poet, who saith:

Assiduo illis durum caput yndula saxum.

Which verse may be Englished with vs in this maner.

The watry droppes so moyst and soft,
Doth perle hard stones with dropping oft.

The first Booke

So in like case (dere Reader) the hard names of medicines by oft reading will be perced, & measse they will be as facile and easie vnto you, as possible may be. Now there resteth no moze but that thou wilt with the same good wil and minde receiue these my trauailes and expences, that I freely doe offer them vnto thee. So doing, I will not here stay, God willing, but participate other of my labours with thee. And thus I bid the most heartely farewell, in Christ our Saviour. At my house in London, the first day of August, 1563.

The first booke of the An-

tidotarie, containing briefly the simples & compounds, answering to all the intentions curative required in the art of Chi-

rurgerie, by Thomas Gale,

Maister in Chirur-

gerie.

Of medicines repercussive, both simple and compound. Cap. j.



Medicines which doe repel and dryue backe, be of qualitie cold, and such as haue an adstringent facultie, although they be hot. The vtilitie springing by the right vse of these, is great. For we stay by them the fluxe of humours in their beginning. Heereof doeth it followe, that we let the generation of inflammations, Apocumes, Ulcers, Feauers, dolour, and paine. Of simple medicines repercussive, these are some in most vse. Waters either fountaine or distilled, Lectule, Bursa pastozis, Pints, Purslane, Plantaine, Coleworts, Wormwood, Centaurie, Mellilote, Pentaphillon, knotgrasse, Houselleke both great & lesse, the leaues & tops of Bramble tree, the Pyrtile tree, Balaustru, Galla omphacitis, omphacium, vineger, wilde Apples

ples and Peares, Medlers, Seruice tree and fruit, Allum, Atramentum sutorium, Cerusa, Litharge, Acatia, Bolus armena, Terra sigillate, Hypocisthis, Aloes, Amomum, Agaricke, Calcanthum, Crocus, Corall, Hematites, Ladanum, Myrrha, Chrysocola, Cadmia, Cinabaris, Sanguis draconis, Spodium, Tragacantha, the Oke, Cypresse leaues, and Myntes, Mandrage apples, and iuise, Henbane, Popie, whites of Egges, and such lyke. Among compounds these are numbred, which doe drie backe and staye the fluxe of humours. Oyle of Roses, Cataplasmes made with the iuise of these hearbes, and with floure. Also cerotes, as cerotum e Psyllio, ceratum Rosaceum, ceratum Myrtinum, Diacalcitis, Oleum Rosatum vulgare, Oleum Rosatum Mesue, Oleum Rosatum omphacium, Oleum Cydoniorum Mesue, vnguentum fantallium Mesue, Hydreleon Galeni, Cataplasma Guil. Buttes ad phlegmones, vnguentum contra phlegmones & pruritus, vnguentum Pomphologos.

Of medicines attractiue, simple and compound.
Cap. ij.

Medicines which doe draw and attract be of hot temperature and subtile partes, they doe draw out of the inwarde partes, as when any venemous matter is in the bodie. Also when splents, bones, scales, thornes, arrow heads, are fixed in any parts, it sucketh out superfluous moisture in dropsies, and such lyke sicknesses.

Medicines simple attractiue be, Propolis, Sagapenum, ammoniacum, Opoponax, Galbanum, Euphorbium, Calx viua, Aristolochia rotunda, Lepidium, Mustard seede, Tithimallus, Pyrethrum, Cantharides. Also stercus columbium, Gallinaceum, anserinum, arietinum, and all such like fumes. Olde oyle, also Turpentine, Larigna, picea abiectina: and such like as haue a great vertue attractiue: Of compound medicines they vse oyle of Mustard seede, Emplastrum apostolicon Nicholai, Oxycroceum, Emplastrum ex allijs Aetij, and diuers other, which you shall finde in the second booke of the Antidotarie.

Of

The first Booke of

Of medicines abstersiue, simple and compound. Cap. iij.

Such medicines as doe mundifie, and cleanse wounds or filthie vlcers: are called abstersiues. Of which simple commonly vsed, be Smallage, Roses, Plantaine, Scabiousse, Pettles, Helondine, Radix dracontij, Lupines, Aristolochia longa, & rotunda, Alume, Barley, and Beane flower, Flos iris, anagallis, Almonds, Sothernewood, Sperage, Asplemos, Mozelwood, Betes, Camepitis, Harts hozne, cortex Caparis, Eleborus albus & niger, Hozehoud, Parietarie, Valerian, whay, Honey, Staphisagre, Pitrum, the compounds are Melicratum, Oxycratum, Oxymel, Ocmel, Precipitatis puluis, Vnguentum Egiptiacum nostrum, veride andromachi, Vnguentum Apostolorum, Vnguentum mundificatiuum Magistrale, and diuers other lyke.

Of resoluing medicines, simple and compound. Cap. iiii.

When as through great fluxes there are humours impact in any parte, then we vse resolutive medicines: the Grækes cal them Diaphoretica, and they be of hot and moist temperature. The simples Diaphoretike, are these. Hot water, hot wyne, Dyles, that be hot in qualitie, Anthemis, Linsæde, Fenegræke, Myntes, Peppe, Calamint, Veneriall, Petles, Balme, Engwort, Camomil, Malwes, Melilote, Dill, Stichados, Marioram, Fumiterry, Mozelwood, Enula Campana, Malwort, Helder, Valerian, Hozehound, Smallage, Coleworts, Beane, and Barley, meale, Turpentine, Ladanum, Sagapenum, Galbanum, Opoponax, Bdellium, Ammoniacū, Coliphonium, Myrre, Frākensence, and the grese of Geese, Capons, Hens, Cranes, Duks, and such lyke. Among compounds specified in the second booke, these are numbred. Barbarum emplastrum, Emplastrum ex chalcitide, Triapharmacum, Diachilon albū, oyles of elder, Lilies, Dill, Camomil, Oleum

Oleum Rosatum compositum Mesue, Oleum Nardinū compositum Mesue, Emplastrum Henrici octavi, Emplast. Gul. Firmigonis militis.

Of medicines mollificatiue, simple and compound. Cap. v.

Medicines mollificatiue which properly in Greeke are named Malactica, are temperately hotte, without any manifest qualitie, either of moisture or drynesse. We vse these medicines when as we will mollifie & make soft, bodies which be scirrhus and hard. Of the simples which doe mollifie, are these: All fatnesse, Butter, Ammoniacum, Bdellium, Atriplex, the rootes of Althea, Waxe, Colophonie, Fenugreke, Cinamome, Saffron, Cypressse, Galbanum, Lyne-seede, Laudanum, Lorrell, Lilies, Mallowes, Opoponax, Oesipius, Piche, Psyllium, all Resines, the marrow of a Hart, a Calfe and Dre, Storax and Prepolis, and Mescelto.

The chiefeest compounds herein vsed, be Diachylon magnum Mesue, Dialthea cum gummis Nicholai, Emplastrum de Melliloto Mesue, Diameliloton Andromachi ex Galeno, Emplastrum ex alijs Aetij, Diachalceteos Galeni, Diachilon Mesue primæ descriptionis, Ceratum e styrace, Cyratū gratia Dei, and such lyke, set out in the second booke.

Of medicines which doe suppurate, simple and compound.

Cap. vi.

When as all hope is past by other medicines, then we take those in vse which do suppurate. And note that generally the great inflammations for the more part, doe induce paine, and pallatiue dolour, & come at length to suppuration.

The simples which doe suppurate for the more part, are Althea, Brackursine, Axūgia, Butter, Calues talow, saffrō, wax, Ammoniū, Fēgreke, wheat, barley, cole flower, & roots of Bzionic,

A Treatise of Gunshot.

Bylonie, white Lillie heads, Ladanum, Lyne seede, Masti-
che, Delipus, Pitch, Frankensence, Rosine, Styazar, Figges,
Stichados, Smyrnum.

Of compounds which be of force in this case: are Pica-
tum ceratum, Terapharmacum, Basilicon, viride Andromachi,
Pastillus Musie, Emplastrum ex fremento Democrati, and
diuers other which neede no rehearse.

Of medicines causticke. Cap. vii.

Cauſticke medicines which doe remoue, and take away
filthinesse in vlcers, and superfluous flesh, are Precipi-
tate, Sublimate, Alome, es Viride, Calchantum, Sanda-
racha, Arsenicum, Puluis noster secretus, vnguentum Egipti-
acum, vnguentum Apostolicum Vigonis, Pastillus Andro-
nius, Pastillus Polyide, Pastillus de Minio Ioannis de Vigo,
Ceratum Viride Iamerici, Aqua corrodens, Aqua Mercuria-
lis, and diuers other which were superfluous to rehearse, se-
ing they are readely founde in the second booke, or else in
the table belonging to the whole woorkes. And that I haue
here in this place remembred the chiefe and principall Cau-
sticke medicines, which are most in vse in these our daies.

Of medicines which do aswage dolour & paine:
both simple and compound.

Cap. viii.

Medicines which doe cease dolour and paine, (called in
Graeke Anodyna) be Dill, Wormewood, Gladiu, A-
garike, Cardamome, Chamomille, Centaurie, Chamae-
petis, Eringium Daucus, Iris, Persely, Rosemarie, Iuniper, Mi-
lium, Opoponax, Althea, Rew, Serpillum, Lyneseede, Hyos-
ciamus, Fygges, Castorium, Cardamome, Agallochum, Atri-
plex, Serpillum, Fenegreke, Peucedanum, the white of egges,
and such like.

Among compounds, these are in vse, Butter, oyle of Ro-
ses, Violets, Phar, Popye, Lettise, Pursulane, Oleum, Masti-
chinum Mesue, Oleum Populium Nicholai, Oleum Hype-
rici,

rici Magistrate, Oleum Mandragore Nicholai, Oleum Lambericorum, Vnguentum infrigidans Galeni, Ceratum Oxyroceum Nicholai, Emplastrum de Speciebus, Cataplasma D. Gul, Buttes ad dolorem sedandum. And such like.

Of Medicines incarnatiue, simple and compound.

Chap. 9.

Medicines incarnatiue which doe also engender flesh, are Aristolochia rotunda, Frankensence, Ladanum, Aloes, Cadmia lota, Pompholix, Amylon, Manna, Myrrhe, Storax, Spodium, Turpentine, Colophonia, Chrysocola, Piche, Christallus, Oesypus.

Of compounds they vse Viride Galeni, Theriaca, Aureum Mesue, Fuscum Nicholai, Tetrapharmacum, Dia Irios, Puluis Rasis, Vnguentum Basilicon Mesue, Ceratum Viride Iamarici, Vnguentum incarnatum Brunsvicensis. And diuerse other set out both in the Enchiridion in their proper places, and also in this second booke.

Of Medicines which doe cicatrise simple and compound. Chap. 10.

Medicines which are to be vsed to cicatrise an vicer, when as it is filled with flesh, are these: Aloes, Bolus armena, Allome, Aristolochia, Anulum, Balauustia, Bdellium, Anagallis, Centozie, Camepittis, Chamedris, Cadmia, Eupatorium, es vltum, Acatia, Gentian, Gypsum, Iris illirica, Licium, Lupines, Mel coctum, Myrtius, Myrrhe, Lithargyrum, Plantaine, Pentaphillon, Paper combust, Sanguis Draconis, Sarcocolla, Stymmi, Sandaracha, Terra Lemnia, Symphiton maius, the leaues of Elder, Frankensence, Tozmentill, Ueruaine, Ceruse, Cupresse galls, Tutia, and such like. The compound are Dia cadmia, Dia ladani, Vnguentum album Rasis, album e Cerula, vnguentum Pompholigos, Puluis Epuloticus, Vnguentum Nicholai, being the seauenth vnguent set out in the second booke. Diapipereos Galeni, Dia Dictamu Eiusdem, Emplastrum Calisense, Emplastrum

L.

Gul.

The second booke of

Gul. Firmigonis Militis, Ceratum Viride Iamerci, Vnguentum desiccantium rubrum, and diuerse other.

Of Medicines Conglutinative, simple and compound. Chap. ii.

Medicines conglutinative simple, be Elder, Maltwort, Syderites, Symphitum, Plantaine, Anogallis, Androsomon, Copwebs, Lania succida, new Cheese, Hatis, Myrrhe, Sarcocolle, Aloes, Barlie combust, Pitch, Rosen, and Gum Arabike. Of Compounds they vse, artificial balmes, among which, that which is set out in the second booke after our inuention, is right excellent, and of great vertue, Barbarum emplastrum Galeni, & ynguentum e vermibus, Oxaleum Galeni, Oenaleum, Ceratum viride Macherionis ex Galeno, and diuerse other, of which I neede not to make a vaine and superfluous rehearsall.

F. I. N. I. S.

The second booke of the

Antidotarie, containing the medicines compound, and their waie of composition, with their vertues and properties, by Thomas Gale Master in Chirurgie.

In the former booke (louing Reader) of this Antidotarie, I haue set out briefelie and eake compendiously, such medicines, simple and compound, as are required in the curative intentions of Chirurgie: now I thinke good in this second booke, to declare the compositions of all such compoundes as are there remembred, and be of most price in the arte. Unto which I haue also added no small number of Vnguent, Oyles, Balmes,

Balmes, Emplaisters, Cerotes, wound, drinke, &c. of mine owne inuention. And here note, that there is difference betwixt the Grecians and the later writers, touching the names of these compound medicines. For the Grecians did call vnguents onelie Aromatike Oyles, wherewith they did annoint the bodie. The Cerotes they called such medicines as receiued into their composition oyle and ware. Emplaisters be medicines which take into their composition diuers kindes of simples, but chiefelie mettalline bodies, and these are so long to be boiled together, vntill they will no longer defile and cleaue to the hands. Cataplasmes be medicines standing on Hearbes, Flowers, Oyles, Wheate, Barlie, Dates, Beanes, and other flowers, which are not so long to be boiled on the fire as Emplaisters are. Trochisce be compositions made round, and were deuised to keepe long time such simples in their force which doe enter into their compositions.

Pouders be medicines beaten and made subtile and fine like moates of the Sunne, as they call them. Waters are prepared diuerse waies by the arte of Alchimie. Dococ-tions, Lotions, and Iniections, be liquors and other things boiled together and then strained. What quantitie of euery simple should be admitted to euery forme of composition, cannot in generall rules be set out, but doth varie according to the curatiue intentions. Perticular formes of compounds, such as be of most price, and bled, shall followe in this second Booke: as also their waie to make them, and to what vse they serue, beginning first with vnguents.

The description of an vnguent called Infri-
gidans Galeni.

R Ec. Olei Rosati omphacini, j. pound, Cerae alba, three
ounces.

Thou shalt melt the ware in the oyle, then wash it often with cold water, vntil it cometh to white coulour. Last of all wash it with water of roses, & put to a little portion of

L. ii.

vineger,

The second booke of

vineger. It is good to refrigerate hot burning feavers, and the heate of the liuer, it allwageeth the paine in the head. It must be anointed vpon the ridge bone, or spine of the backe, vpon the temples, and on the region of the liuer.

Vnguentum ad ambusta.

Rec. Olei rosati, viii. ounces, Olei ex ouis, ii. ounces, Nitri albi puluer. ii. ounces, Ceræ albæ, one ounce and an halfe, Corticis mediani Sambuci, m. i. . Make hereof an vnguent with a soft fire according to art. It is verie good in burnings and scaldings, and like affects.

Vnguentum de Artanita maius Mesue.

Rec. Olei irini, ij. pound, Succī Ciclamini, iij. pound, Cucumeris agrestis, j. pound, Butyri, i. pound, Pulpæ colocinthis, iij. ℥. Polipodij, vj. ℥. Euphorbij, ℥. ℥. Use those that are to be brused, and let them be infused in a vessell of glasse with the iuyces and oiles eight daies, then make them hot in vase duplici, & straine them, then adde Sagapeni, vij. ℥. & ℥. Myrrhe iij. ℥. . These must be dissolved in vineger, and boile all in the decoction afoze said, vntill the iuyces be consumed, then adde to it Ceræ. v. ℥. Fellis vaccini, vii. ℥. and ℥. Make all so hot that the ware may melt, after put into it by little and little the powder following.

Rec. Scammonij, Aloes, Colocinthidis, Mezerei, Turbith, ana, vij. dragmes and a halfe, Salis gemmæ, iij. dragmes and a halfe, Euphorbij, Piperis longi, Zingiberis, Chamæmeli, ana, iij. dragmes, Misce et fiat vnguentum . It prouoketh vomite being anointed on the stomack, but on the nauell it maketh the bellie loose, so that it is good against dropfies, for y it doth much expell cerous humors, it doth also kil worms, and is vsed in such bodies as are not able to take anie purging medicines inwardlie.

Vnguentum Rosarum Mesue.

Rec. Axungia porcina j. pound . Wash it nine or ten times in hot water, and as often in colde . Then you shall adde to it Rosarum rubrarum recentium, one pound.

Macerate

Macerate them and let them stand together seven daies, after boile them with a soft fire, then straine them, and after put so many new roses, and doe as you did with the first. Then take so many more new, and so the fourth time, doing alwaies as with the first roses. Then adde Succu rosarum rubarum, vj. ounces, Olei amygdalarum dulcium, v. ounces. Boile all on a soft fire, vnto the consumption of the iuyce of Roses, then straine them, and reserue it to that vse. Alij addunt Opij one dragme. It ceaseth Inflammations, Herpes, and Crisipelas, and is good against the head each coming of heate. It doth allwaie the hot distemperance of the stomack and liuer, Vnguentum album Auicennæ, Vnguentum de cerusa dictum.

Rec. Lithargyri, j. dragme, Cerusæ, v. dragmes, Ceræ albæ, vij. dragmes, Olei Rosati, ij. ounces, Albuminis ouorum numero. j.

The ware being molten in the oyle with a soft fire, put in your litarge and Ceruse well beaten and searced. Mire these, and last of all you shall put in the white of an egge. This vnguent is good against adustion, scabs, and vlcers.

Vnguentum de Tutia Magistrale.

Rec. Olei Rosati, Olei omphacini, ana, vj. ounces, Olei Myrtini, Vnguenti Populei, ana, ij. ounces, Foliorum Plantaginis, Solani, ana, m. ij.

The hearbs being well cut and brused, mire them with the oiles, letting them macerate together eight daies. Then boile them a little and straine them, which done, you shall adde of Ceræ albæ, iiij. ounces and a halfe. Boile them vntill the ware be molten, stirring it with a slice. And take it frō the fire, adding to it of Lithargyri, vi. ounces, Pompholigos siue Tutia preparata, Cerusæ trite, ana, ij. ounces, Plumbi vsti vi. ounces, Caphuræ, j. ounce. Put ail in a Leaden mortar, & let it be stirred two houres continuallie. After put it into a vessell of Glasse, and reserue it to thy vse.

Aliud simile, Nicolai.

Rec. Olei rosati, Ceræ albæ, ana, vi. dragmes, Succu solani,
L. iij. j. dragme,

The second booke of

j. dragme, Cerusæ lotæ, ij. dragmes, Plumbi vsti et loti, Tutia preparata, ana, j. dragme, Thuris, halfe a dragme.

Melt the ware in the oile with a soft fire, then put them in a leaden morter, and put the pouders into them, continually stirring them. And then put to the iuyces of the hearbs, stirring it still for the space of fire houres.

These two vnguents are excellent in ericating Crispeles, filthie vlcers, also for vlcers of the legs, & do fill the hollow and emptie parts, it doth furthermoze refrigerate & cicatrise.

Vnguentum de Lythargiro.

Rec. Lithargyri, ij. ounces, Cerusæ halfe an ounce, Aceti, j. ounce, Olei rosati quantū sufficit. Make these in an vnguent with a soft fire, it cureth vlcers and excoriations made thorough riding, straitnesse of the shooe, or otherwise hapning.

Tripharmacum eiusdem Mesue.

Rec. Lithargyri, Aceti fortis, ana, iii. 3. Olei cōmunis, vi. vnc. Let the Litarge be finely poudered, and put to it the oyle and vinegar, and stirre them continuallie. It is of like vertue with the vnguent going before, for it healeth scabs and vlcers of the skin, and such like.

Vnguentum ad Scabiem.

Rec. Styracis liquidæ, Terebinthine lotæ, Butyri loti, ana, vij. 3. Succu limonum, i. 3. & ꝑ. Hellebori nigri puluerisati, i. 3. Salis, ij. 3. Mixe them together, and make thereof an vnguent according to art.

It hath the like vertues with the vnguent going before.

Vnguentum de Minio.

Rec. Minij læuissime triti, ij. 3. Olei rosati, Olei Myrtini, ana ij. 3. Coquantur lento igni cum Ceræ albæ, halfe an vnce. Make and vnguent thereof according to art.

Aliud de Minio Camphoratum.

Rec. Minij triti, ij. 3. Lithargyri, ij. 3. Cerusæ, j. 3. & ꝑ. Tutie, Camphoræ, ana, iii. 3. Olei rosati, p. i. and ꝑ. Ceræ albæ, ii. 3. The ware being molten in the oile vpon a soft & gentle fire, put it in a leaden morter, and put the other simples made in
mo

moſt fine powder into it, and ſtirre them continuallie.

This vngent is good againſt olde and maligne vlcers, & ſuch as will hardly be cured, &c.

Tetrapharmacon Galeni.

Rec. Picis nigræ, Refinæ, Ceræ, Adipis vaccini, ana, q. ſ. Fiat vnguentū. It doth heat & make moiſt the part to which it is applied, it ceaſeth dolour, & doth ſuppurate & make matter or ſanies. Wherefore it is right good for to bring Apoftumes to ſupuration.

Vnguentum Baſilicon minus Meſue.

Rec. Ceræ flauæ, Refinæ pinguis, Picis grecæ, ana, i. pound. Olei communis q. ſ. Fiat vnguentū lento igni. Some put Turpentine to it, ſome in the place of it doe put pitch.

This vnguent anſwereth to the vertues of Baſilicon minus, but it is more weake. Wherefore it is more apt for greene wounds of the head and neruous partes, and vlcers.

Vnguentum Baſilicon maius Meſuæ Galeni Enneapharmacum eſt.

Rec. Ceræ albæ, Refinæ pini, Sepi vaccini, Picis Grecæ, Picis nigræ, Terebinthinæ, Thuris, Myrrha, ana, i. 3. Olei communis. q. ſ. Fiat vnguentum.

Such vlcers as be without inflammation in y neruous & ſinnowie partes, this vnguent filleth with fleſh, & incarneth verie well.

Vnguentum fuſcum Nicolai.

Rec. Olei, i. pound & 1/2. Ceræ nouæ, iiii. 3. Picis Grece, Picis nigræ, ana, ii. 3. Maſtiches, Galbani, Thuris, ana, i. 3. Sagapeni, ii. 3. Terebinthinæ i. ounce, Fiat vnguentum.

This vnguent hath a power & vertue of healing & attracting.

Vnguentum Capitale Conciliatoris.

Rec. Gummi eleni, iiii. 3. Hammoniæ, ii. 3. Terebinthinæ, Reſinæ pini, ana, iiii. 3. & 1/2. Cere q. ſ. Make of this an vnguent, & let the gums be diſſolued according to art, & ſo long boiled, untill they come almoſt into the forme of a cerote.

Vnguentum à Capriſolio Carpi.

Rec. Terebinthinæ, Reſinæ pini, Cere nouæ, ana, iiii. ounces, Olei roſati, viii. ounces, Maſtiches, Thuris, ana, one ounce,
L.iii. Gummi

The second booke of

Gummi eleni, ij. ounces, Caprifolij, Betonica, ana, iij. ounces, Vini optimi, x. pound. The Woodbinds and Betonie being stamped, let them stand infused in wine foure and twentie houres. Then adde to them all the other parcells, except the Gums, Frankensence, and Mastike, boile these on a clere fire untill the halfe part of the wine be consumed, and that it beginneth to ware greene, then straine it and let it cole. Then boile it againe untill all the wine be consumed, then straine it againe, and then boile it, and adde the rest of the parcells in fine powder, and then put it in a colde place, and reserue it to thy vse.

This is a right excellent medicine in woundes of the head.

Vnguentum à Calce magistrale.

Thou shalt euerie daie once wash the Chalke, and let the water be taken awaie with a Sponge, doe this ten dayes. Then washe it with Rose water, and let it drie, and then Rec. Huius calcis ita extincte, three ounces, Olei rosati, one pound, Cere albæ, three ounces.

Melt the ware in the oyle, then taking it from the fire, put the Chalke made in most fine powder, vnto the oyle and ware, and make an vnguent of them according to art. This vnguent is good for burnings and scaldings.

Vnguentum Populeon Nicolai.

Rec. Oculorum Populi arboris recentium mense Martio collectorum, a pound and a halfe, Axungia porcina præparata, iij. pound.

The Pople buddes must be brused, and mixed with your Axungia, untill your other hearbes may be prepared, then adde to it Foliorum Papaueris agrestis, Foliorum Mandragoræ, foliorum Hyoscyami, foliorum Solani, foliorum vermicularis, aut Crassulæ, foliorum Lactuæ, foliorum Semperiui, foliorum Bardanæ, foliorum Portulacæ, foliorum Violariæ, foliorum Umblici veneris, ana. iij. ounces.

These hearbes must be mixed & tempered with Axungia, then

then take of Wyne a sufficient quantitie: Boyle them to the consumption of the wyne, then straine them and make of them an vnguent according to art.

It is meruailous precious against raging heate in fevers, and it prouoketh sleepe, the temples being annoynted with it. &c.

Vnguentum Dialthea simplex Nicolai.

Rec. Radicis altheæ, two pound. Seminis Lini, Fœnogræci, ana, one pound. Olei, foure pound, Ceræ, j. pound. Terebinthinæ, two vnces. Resinæ, vj. vnces.

Let the rootes be cut and brused with the seedes, and stande three dayes in eight pintes of water: then boyle them and take two pound of the Muscilage & boile it with the other thinges, untill all that is waterie be consumed. And make thereof an vnguent according to art.

This vnguent doth mollifie, heate, and make moyst.

Vnguentum Dialthæa-cum Gummis Nicolai.

Rec. Radicum altheæ, two pound. Seminis Lini, Fœnogræci, ana, one pound. Pulpæ scillæ, vj. vnces. Olei, foure pound. Ceræ, one pound. Terebinthinæ, two vnces. Resinæ, Picis Græcæ, ana, vi. vnces.

Make an Vnguent as is aforesayde, then adde to the Gummes following, first being dissolued in Vineger. Galbani, Gummi Hedere, ana, two vnces.

Mixe them well, and reserue it to thy vse.

This vnguent properly helpeth the paine of the brest, coming of colde, and the Plurisie, and healeth all partes of the brestes, which are refrigerated, it doth moysten, mollifie and make hot.

Vnguentum Santalinum Mesuæ.

Rec. Rosarum ruberaum, one vnce. Sandali rubri, j. vnce, ij. dragmes. Sandali citrini, Sandali albi, ana, vj. dragmes. Spodij

L.v.

halfe

The second booke of

halfe an vnce. Caphura, two dragmes. Cere albe, three vnces.
vj. dragmes. Olei Rosati, one pound. Boli armeni. vij. dragmes.

You shall melt the Ware in the oyle, and wash it often
times with cold water, after that all your other percells be-
ing made in fine powder, you shall put them together, and
make a fine vnguent according to art.

It doth extinguishe and put away all inflammations of
the liuer and stomacke, and other parts of the bodie.

Defensiuum Magistrale.

Rec. Boli armeni, Sanguinis draconis, Terre sigillate, ana
one vnce. Olei Rosati. vj. vnces. Cere, one vnce and a halfe. A-
ceti, foure vnces.

Boyle the oyle, vinegar, and ware together, vntill the
vineger be consumed. Then taking it from the fire when
as it begin to refrigerate and ware colde, put to your other
parcells made in fine powder, and reserue it to thy vse.

Mundificatium Magistrale.

Rec. Mellis Rosati colati, i. ounce and a halfe, Terebinthi-
ne clare, iii. ounces, Succi Apij, Succi Prasij, ana, six dragmes,
Succi absinthij, two dragmes.

Simul coquantur, deinde addentur.

Farine Hordei, farine Fabarum, ana, vi. dragmes, farine Lu-
pinorum, farine Orobi, ana, iii. dragmes, Sarcocollæ, Myrrhæ,
ana, i. dragme and a halfe.

Bring them into powder and make an vnguent accor-
ding to arte. And this vnguent is right excellent to munda-
fise a wound or filthie vlcer, and thereof it is called Mun-
dificatium Magistrale.

Vnguentum Viride Andromachi ex Galeno.

Rec. Resinæ pini, ii. pound, Cera, i. pound and a halfe, Olei
communis, viii. ounces, Aeruginis eris, iij. ounces.

You shall put the Rosen and ware into the oile & melt
them.

them together, the put to your Crugoeris made in fine powder, and make thereof an vnguent as art requireth, it healeth greene and fresh wounds, and such like, &c.

Vnguentum Apostolorum Auicennæ.

Rec. Cerae albe, Terebinthinæ, Resinæ, Hammoniæ, ana, xliiii. dragmes, Aristolochiæ longæ, Thuris, Bdellij, ana, vi. dragmes, Myrrhe, Galbani, ana, foure dragmes, Lithargiri, viii. dragmes, Opoponacis, Aeruginis, ana, two dragmes, Olei communis, two pound, Hieme verò, three pound.

You shall dissolue your gums in good white vinegar, then put them to your oile, ware, Rosen, Turpentine, and Litarge, and boyle them on the fire vnto the consumption of the Vineger. Afterward the other percelles being made in fine powder you shal also adde, and make an vnguent according to art.

It is of great force against woundes and vlcers which are hard to be cured: also for fistules, it taketh away deade flesh, and restoreth in the place sound and new. It doth mollifie and heale, &c.

Vnguentum Egiptiacum Mesuræ.

Rec. Aeruginis, siue dragmes. Mellis, xliii. dragmes, Aceti albi, vij. dragmes.

Boyle these on the fire, and styre them, so long vntill it be red. Other take of this vnguent, five vneces.

Rec. Calcanthi vsti, two vneces. Olei Rosati, iij. vneces. Cerae, quantum sufficit.

Make all in an vnguent according to art. This is right good against olde wounds, fistules, and also it taketh away superfluous flesh, and doth vehemently excitate and drye.

Aliud Ioannis de Vigo.

Rec. Aquæ plantaginis, Vini malorum gran. Mellis, ana, two vneces.

Alumi-

The second booke of

Aluminis rupis, Aeruginis, ana. x. dragmes.

Boyle these together, and fyre them so long until that it waxe redde, then reserue it to thy vse.

It serueth to the lyke effects as the other before.

Aliud Guydonis.

Rec. Mellis, one pound. Aceti optimi, vj. vneces. Aeruginis, one vnce. Aluminis rupis, v. dragmes.

Boyle and fyre them so long together until they wax redde. Then let it cole, and keepe it to thy vse.

Vnguentum defensuum & repercussuum
Brunswicensis.

Rec. Olei Rosacei, iij. vneces. Boli armeni, ij. vneces. Terræ figillatæ, Foenogreci, ana. i. vnce. Caphuræ. i. dragme. Solatri, Semperiui, ana. i. M. Cera. two vneces.

Use the herbes and straine them, and put them to the other things: and make of all an vnguent according to art.

This vnguent is bled to defend wounds from accidets. Also in the beginning of inflammations, to cease or rather let the flure of humours.

Vnguentum incarnatiuum eiusdem.

Rec. Terebinthine, iij. vneces. Mellis, halfe an vnce. Olibani, one dragme. Croci, one scruple. Olei Rosacei, Cere. q. s.

Make hereoff an vnguent according to art.

It is a right good incarnatiue, prouoking and causing flesh to grow in all maner of wounds. &c.

Vnguentum ad phlegmones & pruritus.

Rec. Olei rosati, three vneces. Infrigidantis Galeni, Vnguëti Rosarum populionis, ana. i. vnce. Succu plantaginis, Semperiui, Vini granatorum, ana halfe an vnce. Aceti Rosarum, two dragmes. Lithargiri auri, Argenti, ana. i. vnce and a halfe.

Ceru-

Ceruse.v.dragmes, Tutie.j.dragme.

Put the oyle, the iuyces, vineger and wine into a mortar of lead, and labour them well, and put thereto the merall in fine powder, and when they are well wrought, put thereto the vnguent, and worke them all together, and so make your vnguent.

This Vnguent is for itch of the legges and inflammation, excoziation, burning and blistering, coming of hot humours, and for hot and sharpe vlcérations. &c.

Vnguentum Phompholigos.

Rec. Olei Rosati. x. vnces. Cerę albę, three vnces. Succı Solatri. viij. vnces. Ceruse lotæ. iij. vnces. Plumbi vsti, Tutie, ana, two vnces. Thuris. i. vnce.

Boyle the iuyce of nightshade with y oyle, till the iuice be consumed, then put to the wax, and when it is relented and set from the fier, so that it be neere cold, put thereto the Cerusa, burnt leade, Tutia, and Thus, made in fine powder, and searsed thzough a fine searce, wyre them well together and keepe them in a tinne pot. &c.

This vnguent is not onely good in drying vp of vlcérations of the leges and other places of the bodie, but it is also an excellent remedie, to pıeserue a canker vlcerate, that it go no further, & also a singuler good remedie, for all other Cancerous vlcérations, both in the brest and in all other places of the bodie.

Vnguentum Nicolai Florentini.

A speciall vnguent for the crampe, if the patient haue no feuer, it was practised by Nicholas Florentine.

TAke a fatte Gose, and take out hir bowels, then take a Catte and cut hir in small pıeces, and put the same pıeces into the belly of the Gose, with small pıeces of Bacon, Myrhe and Frankensence mingled all together, then sew vp the belly of the Gose, and put hir on a spit, and roast hir at a soft fier. Set a dripping panne vnder hir with Vineger and white wine, and when the water of the Gose is

The second Booke of

is dropped away, then let the fat drop into the vinegar and the wyne. After take the fatte that swimmeth about the vinegar and wyne, and keepe it in a vessell, and boyle the Goose againe in the foresaid Vineger and wyne, and much fat will come from hir againe, and then take this fat and mire it with the first that dropped from hir. And with this vnguent annoynt the member which hath the crampe, for it is very precious, and hath vertue to seace paine, to wast consume & dry vp euill humours, and to comfort the members, if some of this vnguent be put into the vnguent, vsed in Chamelcontiasis, it helpeth very much, and doth seace the paine of that contagious sicknesse.

Vnguentum Ioannis de Vigo, contra Chamelcontiasin.

Rec. Olei, one vnce. Vnguenti pro spasmo, two vnces. Axungie porcinae iiij. vnces. Olibani, halfe a vnce. Euforbij, one dragme and a halfe. Vnguentum de althea, Vnguentum Agrippae, ana j. vnce. Argenti Viui, iiij. vnces.

Let all these be beaten together in a mortar of Iron or Stone tyll no parte of the Argenti Viui, be scene, but see thou mortifie the same firste in a little glasse with Veneyger and fasting spettell, that it may the more easely myngle wyth the foresayde thinges, and doe lesse hurte in the working, let your Olibanum and Euphorbium be made in fine powder, and searsed fine before you mire them with the foresayd thinges. Provided alwayes that the matter antecedent be digested, & sufficiently purged, before they lay this vnguent on the body.

Aliud Vnguentum pro eadem Chamelcontiasis.

Note that this vnguent according as Nicholas Massa, and other notable wyters both olde and newe doth testify, it doth heale not onely the paynes of that same contagious sicknes, but also the breaking out of those that be scabbed, it resolueth harde Apostumes which is called Grumas, bunches, or harde knots of the sinowes of the armes and of other

ther places, also it healeth vlcers of euill curation or harde to be cured. This vnguent must be applied vppon the legs, the armes, and vppon the ioyntes, chiefly in the hammes in the bowing of the armes, the wreste of the handes, the wreste of the foote, & the soles of the fete. Also you must annoynt the sores therewithall, but beware yee lay not this vnguent nigh the pꝛincipall partes: as the bꝛeaste and the stomacke, but you may annoynte the shoulder blades, the buttockes with it, & if neede be yee may lay a little on the foꝛehead, and this is the making of it.

Rec. Axungie porcin the little skinnes taken from it without melting of the fire. ij. pounce.

Argenti viui, ij. pounce. Lytargyri, iij. pounce. Ceruse, iij. vncces. Olibani, j. vncc.

Mixe all these together, and make thereof an vnguent, in a moꝛter, but firste of all you must beate the swynes grease & the Argentū viūū together very strongly, then put in the other thinges in fine pouder, and labour it wel with your pestell vntill it be so fine that none of the Argentum viuum be seene. Note that this vnguent is the chiefe matter of all the curation of this disease, for because you may mixe other medicines, with this medicine according to the diuersitie of the sickenes that the patient hath: as for example. If the sickenes came with hard swelling, adde Capons grease, Duckes grease, or Goose grease, and sometime you may adde all these thinges, and sometime one, as you see cause, for with their hotnesse and moistenes they doe resoluē the hardnesse, and so comfoꝛte the hurte member, and if it chaunce that there be swelling with great paine, you may adde Oyle of Lilies, of Bayes, of Dill, and Turpentine, either one of them, or moe as yee see cause, for they be stronger in operation, and their vertue is greete.

And if the disease be maligne or Virulent, that the Patient may not bee altered or holpen with a lyghte medicine, put in moꝛe of the Argentum Viuum, and adde thereto Aqua vite, Sage, Stichados, Treacle, Myrrhe and Masticke.

It is to be feared of excoꝛiation that may come by the strength

The second Booke of

Strength and corrosion of the Argentum vinum. Therefore we correct this vnguent with Lychargiri and Cerusa, as we haue written here before in this vnguent. And as you doe finde diuers things added vnto this vnguent, so doth it remone diuers accidents and sicknesses. But beware you minister not this vnguent without discretion, for euen as it doth helpe this contagious disease being rightly vsed, so being vsed without discretion, it doth kill and destroy.

Provided alway that this be not ministered without purgation and digestion of the mattier antecedent. The patient may not goe abroad after his sweating, vntill such time as his mouth be whole, and must vse good lotions, or washings for his mouth, vntill it be whole.

Tertium vnguentum pro Chameleontasi.

Rec. Laureole, Abinthij Fumarie, Centaurij. ana. m. s. Euphorbij, Elebori albi. ana three dragmes. Colocinthidis, two dragmes.

Boyle your herbes, your powder and Coloquintida altogether, your herbes being a little brused in a mortar, and your Coloquintida broken in small peeces, in one quart of good Palmisie, till the halfe be consumed, then let it stand a day and a night infused, and straine, it and ad therevnto : Succi Rutæ, Saluiæ, Ebuli. ana two vnces. Then take Axungia. xij. vnces. Ping. Anatis, Caponis. ana. iij. vnces. Oyle de Bay. vj. vnces, Lithargiri auri, Olibani. ana two vnces. Mastiches, Aloes cicatrine, Scammonia, ana halfe an vnce. Argenti viui. viij. vnces.

Take all those things that are to be made in poudre, in fine poudre, and mortifie your Argente viue, with fasting spetle, or with iuise of Limons. Then beate all your foresayde things together, putting in your iuise and your decoction together by little and little, continually labouring it in a mortar, vntill it be brought to a perfect vnguent.

This vnguent must be applied vpon the legs, & armes as other vnguents be that serueth for the same disease. And if you will haue them moze laxative, anoynt the nauill therewith. It taketh away apostumes, vlcérations & breaking

king out of the bodie, and dolour and paines springing of the same sicknesse.

Aliud vnguentum pro eadem Chamæleontiafi.

Rec. Maceris, Cinamomi, Gariophil. ana, halfe an ounce, Granorum paradisi, two dragmes, Foliorum rosarum rub. Corticum limonum, ana, fiue dragmes, Nucum musc. numero foure.

Let all these be beaten together and laied in steape in Rose water the space of one daie and one night, then put vnto the same water and spices, of swines grease and newe suet fiue pound. Boile them together vntill the water bee consumed, and straine it. Then take of the same ii. pound, Argenti viui, seauen ounces, Olibani, two ounces, Mastiches, Cerusæ, Lithargyri, ana, one ounce and a halfe, Socchados, Myrrhæ, ana, halfe an ounce.

And in the ende put of Muske resolved in Oyle of Roses, halfe a Scruple. And let these bee mixed together, and make thereof a fine vnguent according to arte, as is aforesayde. And this vnguent is for rich and delicate persons, and is also meruailous in operation, and must bee vled as these are, which serueth for the same infirmitie.

Vnguentum Aegyptiacum.

Rec. Mellis, two pound, Aceti fortis, one pound, Viridis æris, foure ounces, Aluminis, three ounces.

Boile all these together on a softe fire, vntil it be red, for if you boile it too much, it wil bee black, and if you boyle it too little, it will bee greene. Therefore when it is boyled inough, it will be perfectlie redden. This vnguent I haue found greate profite in to mundifie sores, for it taketh away rotten flesh without anie great paine, it doeth also profite much in Fistules, and hollowe vlcers, if it bee mingled with some conuenient liquour, and conueyed in with a siring. It doeth also abate and take awaie spongeous flesh both in woundes and in vlcers, and maketh them come to easie

The second booke of
cicatrisation, and this vnguent is much praised, both of the
olde wyters, and of the new, in many other things.

Vnguentum Dialtheæ.

Rec. Radicum altheæ, two pound, Sem. Lini, Fœnogræci,
ana, one pound, Olei communis, foure pound, Cere, one
pound, Terebinthinæ, Galbani, ana, foure ounces, Gummi he-
deræ, two ounces, Colophonij, Perrosin, ana, halfe a
pounde.

Wash your rootes cleane, and bruse them in a morter,
and bruse your Lincseade and Fenegræke also, and put
therevnto of Scilla brused, halfe a pound, put vnto all this
eight pintes of water, and let them stand thre dayes, and
the fourth daie boile them on the fire till they beginne to
waie thicke. Then put them into a pot, and when you wil
straine it, put ther vnto some hot boiling water, that it may
the better be strained, then take of this muscilage oz strai-
ning two pound and a halfe, and put vnto your Oyle of
foresayde, and let them boile vntill the muscilage bee con-
sumed. Then put therevnto your Ware, your Turpen-
tine, your Galbanum and Gumme Edece, dissolued in Vi-
neger and stained, then your Perrosin molten with a little
Oyle of Lillies, and last of all put in your Colophonium in
fine Pouder, continuallie stirring all these together til they
be colde, and so keepe it.

This vnguent called Dialthea, is a speciall remedie for
all paines of the breast that cometh of colde, if the breast
be therewith all anointed, and warme clothes layed there-
vpon. It is good also for the Plarisie, and it doeth resolu-
and mollifie, which are required in both these diseases. It is
good also for shrinking of sinnewes and tendons, and also
for crooked ioyntes, for it mollifieth and supplyeth them
gentlie, so that it maketh them easilie to stretch forth a-
gayne. Manie other good properties it hath in doing of
such lyke thinges.

Vnguentum

Vnguentum desiccantium Rubrum.

Rec. Lapidis Calaminaris, Terre sigillatę Rubę, ana, foure ounces, Lithargyri auri, Cerusę, ana, three ounces, Camphorę, one dragme, Cęrę, siue ounces, Oleorum Rosarum, Violarum, ana, vj. ounces.

Wash your Lapis Calaminaris, Litharge, and Ceruse, and drie them againe, and make all these in verie fine powder, that is to be made in powder, then melt your Oyles with your Ware, and in the cooling put therein your Powders, continuallie stirring it with a splatter vntill it bee colde, and so keepe it to your vse. Some doe adde vnto this vnguent Oyle of Penuphar, one ounce, Olibanum & Mastike, ana, one ounce, and if you do so, it is the better.

This vnguent is verie good to drie by ulcerations, and chiefelie of the legges, after that they be mundified, and the flesh well incarnate, for otherwise it profiteth not, for it serueth for no other purpose, but onelie to drie, and defend humours, and to make perfect cicatrisation.

Oleum Rosatum.

Rec. Olei communis, foure pound, Rosarum rubrarum purgatarum, xvj. ounces.

Macerate them, and let them stand in the Sonne right daies, then take cut the Roses and straine them. After put in newe Roses, and let them in lyke manner stand eight daies, and straine them as afoze. And doe so the third time, and reserue this to thy vse. Some vse to let the Roses remaine in the oyle the last time.

It doth refrigerate and is astringent, and helpeth inflammations in the partes of the bodie, and it ceaseth the corrosion of the intestines ministred in Clusters, and healeth the paine of the teeth, they being washed therewith.

The second booke of

Oleum Rosatum completum Mesuae.

Rec. Olei ex oleis maturis, aqua fontana multoties loti quantum voles.

Put into this oyle of redde Rose leaues so many as you shall thinke conuenient, set these in the Sunne eight dayes, then boile them in a double vessell on the fire thre hours. Then straine them. And after take new roses, and doe as afore is said. And doe so also the third time. After put to the fourth part of water of the infusion of Roses, and let them stand in the Sunne fortie daies. Then straine it and againe put to the iuyce of Roses, and let it stande in the Sunne.

It doeth strengthen the partes of the bodie, it resolueth, and cealeth dolour.

Oleum Rosatum Pauli.

Rec. Rosarum exemptis vnguibus, three ounces, Olei omphacini, sixe ounces.

Put these in a glasse and stop them well that they breath not out, and let them stand in the Sunne fortie daies. Other doe not set the glasse in the Sunne, but hang the glasse in a well nere to the water, for the space of fortie daies.

It doth extinguish inflammations, it doth corroborate, rectifie, and cease fluxes, it keepeth backe the humours which floweth through the bodie, &c.

Oleum Rosatum omphacinum.

Rec. Olei Oliuarum immaturarum loti, one pound, Rosarum rubrarum purgatarum, foure ounces.

The Roses being brused and mixed with the Oyle, put them in a glasse, and doe as is afore sayd in the composition of the other oyles, and change your roses thre times.

The vertue of this Oyle is all one with that which is mentioned before.

Oleum

Oleum Chamamelinum Pauli.

Rec. Florum Chamemeli, demptis folijs albis, iij. ounces, Olei oliuarum two pound and a halfe.

The floures must dye in the shadowe 24. houres; then put them with the oyle into a glasse with a narrow mouth, being well stopp'd; and let it stand in the Sunne foz tie daies.

It is of right good effect in the passions of the ioynts, and foz the Collike, and many other infirmities, foz it doth repell and moderatlie digest.

Oleum Cydoniorum Mesur.

Fiat ex carne Cydoniorum præmaturorum cum cortice. Succu Cydoniorum, ana. vi. ounces, Olei oliuarum immaturarum, iij. pound.

Put all in a glasse well stopp'd, and let it stand fiftene daies in the Sunne. Then boile it by the space of foure houres on the fire in a double vessell. Then straine it and presse out the iuyce. Then put new into the Dyle, and let it in the Sunne, after boile it, and expresse it as afoze, and doe so the third time, and reserue it to thy vse.

It doth refrigerate, and stayeth fluxes, and doeth also strengthen the bellie and nerues; being applyed vnto them, &c.

Oleum populeon Nicolai.

Rec. Olei, vii. pound, two ounces, Vini, iij. pound, Gemmarum Populi arboris recentum, three pound.

The buddes of Pople must be bzused and macerated in Dyle and Wine, the space of seauen dayes. Then boyle them in a double vessell vntill the wine be consumed, then straine it and reserue it to thy vse.

It helpeth paine in the head, in the ioyntes, and is good against the gout, and whereas dolour and paine is, &c.

M, iij.

Oleum

Oleum Nardinum compositum Mesue.

Rec. Nardi Indica, foure ounces, Sampsuchi, id est, Maiorane, two ounces, Ligni Aloes, Ehulæ, Folij indi, Calami aromatici, Foliorum Lauri, Cyperi, Schoenanthi, Cardomoni, ana, one ounce. Bruise all these, and put to it of Vni, Aqua, ana. q. s. Olei loti, vi. pound.

Let them be macerated twelue houres together. Then boyle them in a double hessell, and make an oyle according to arte.

This Oyle doth heate, attenuate, and digest, wherefoze it is right good in all colde and winde infirmities of the braine, stomacke, liuer, splene, reines, bladder, and matrice. It doth also cause good coulour of the bodie, &c.

Oleum Sampsuchinum.

Rec. Foliorum Sampsuchi, id est, Maiorane, m. iij. Serpelli. m. ij. Foliorum Myrti, m. i. Abrotoni, Sifymbrij fermentæ aquaticæ, ana. m. halfe, Cacie, two ounces, Olei omphacini, quantum sufficit.

Cut and bruse the hearbes, and put them in a glasse, and set this glasse in the Sunne eight daies. Then straine it, which done, put other new parcelles, and boile it againe and straine it, and doe this the third time.

It helpeth lassitude and wearinesse, and is right comfortable in passions of the braine and nerves. Therefore the spine of the backe being annointed with it, it helpeth the Palsie and Crampe, and is good against the sting of Scorpions, &c.

Oleum Hyperici magistrale.

Rec. Olei veteris, foure pound, Vini albi petentis, one pound. Florum Hyperici cum semine recentium, m. iij.

Bruse the flowers and macerate them in the wine and oyle,

oyle, being put in a glasse well stopt & sealed. Then bolle
them, straine them, and put it in floures to them. This do
thrice, then put to euery pinte of this of Trebintine, vi
ounces, Oleum suthij, three ounces, Dictamnij, Sassafras, Car
dui benedicti, Tormentillæ, Carlinæ, Calami aromatici, ana
two dragmes, Lumbricorum in Vino pluries Lotorum, two
ounces.

Bruse all and let them stand in the Sunne forty daies,
and stop the glasse well, and receiue it to thy vse. It hath the vertues with those going before, and is of
more force in the same infirmities, &c.

Oleum Castorei magistrale.

Rec. Castorei, Styracis calamixæ, Galbani, Euphorbij, Ca-
fiæ, Croci, Opopanacis, Carpobalsami, Spicæ nardi indicæ,
Costi, ana, two dragmes, Cyperi, Schoenanthi, Piperis longi,
Piperis nigri, Sabinæ, Pyrethi, ana, two dragmes and a halfe,
Olei, foure pound, Vini, two pound.

Dissolve the Opoponar and Galbanum in some parte of the wine. Then bruse the other things, and put them to the Oyle and the rest of the wine, and boile them untill the wine be consumed, then straine it and put the Guins and Wine, in which they were dissolved to it, and boyle them together untill the Wine be consumed, and reserve it to thy vse.

It is a singular remedie for all colde passions, especially of the ioyntes and nervous partes. It healeth the Palsie, Crampe, and rigours in Feavers, if you anoint the backe with it, &c.

Oleum Costinum Mefuræ.

Rec. Costi, two ounces, Casia, one ounce, Summitatum
sappsiuchi, viii. ounces. Vini quantum sufficit, Oleo linarum
thib: pond.

Bruse these and macerate them two daies, then boyle
them in a double vessell until the consumption of the wine &

The second booke of

reſerue it to thy uſe, &c.

It openeth obſtructions, helpeth the ſinnowie partes, muscles, tendons, and ligaments. Alſo the ſtomacke and liuer, and helpeth much to the increaſing of good colour in the bodie, &c.

Oleum Papauerinum.

Rec. Capitem papaueris, Foliorum papaueris, Florum papaueris, ana, partes equales, Olei quantum ſufficit. Put theſe in a Glaſſe, and let them ſtand ſeauen daies in the Sunne, then ſtraine them, and put new to the Dyle, this doe three times.

It taketh aſwaie hot diſtemperance, and paines and grieſe ſpringing thereof.

Oleum Lumbricorum.

Rec. Lumbricorum terreſtrium, halfe a pound, Probe lauentur in vino, deinde immitantur in olei roſati omphacini, ij. pound, Vini, two ounces.

Boile all in a double veſſell vnto the conſumption of the Wine, then ſtraine them, and reſerue it to thy uſe.

It cureth the colde paſſions of the nerues, and is profitable for dolour and paine of the ioyntes, &c.

Oleum Baſſami Petri de Ebeno.

Rec. Myrrhæ, Aloes, Spice nardi, Sanguinis draconis, Thuris, Mumia, Opoponacis, ana, two dragmes, Carpobalaſami, Bdellij, Hammoniacy, Sarcocolle, Croci, Maſtiches, Gummi arabici, Styracis liquide, ana, two dragmes, Ladani, Caſtorei, ana, two dragmes and a halfe, Maſtiches halfe a dragme, Terebinthinæ ad pondus omnium.

Bruſe thoſe that are to be bruſed, and mire them together, and diſtill them in a Glaſſe or Limbecke according to arte.

It is of great force and ſtrength againſt thoſe infirmities

milks, which spring of colde causes &c.

Oleum Balsami Brunswicensis.

Rec. Ligni aloes, two vnces. Opopanacis, Resinæ de Pino, Bdellij, Galbani, Ammoniacy, Mastiches, Sarcocollæ, ana. iij. vnces. Gūmi elemij, Olibani, Myrrhæ, Gummi cupressi, Olei Laurini, Olei Benedicti, Laudani, ana. iij. ʒ. Carpobalsami, Xylobalsami, Opobalsami, ana. j. ʒ. Sanguinis draconis, halfe an vnce. Castorij, Spice nardi, Cubube, Maceris, Cinnamomi, Granorum paradisi, Corticis citri, ana. j. dragme. Olei Terebinthinæ, omnium pondus.

Put all these together, and distill them by a Glasse limbecke, and reserue it to thy vse.

This is the Baulme wherewith greene & fresh wounds are speedilie cured and healed, and it hath merueillous vertues as shall appeare to him that putteth it in practise.

Balsamum viride nostre inuentionis.

Rec. Olei Rosarum, one pounce and a halfe. Put it in a panne, & put thereto Rorismarine, Caphare, ana. iij. vnces.

Let them be brused before you put them in, then take, Malicorij, one vnce, and a halfe. Ligni vite, two vnces.

Being made in fine powder then boyle all these together the space of an hower, straine them and put to the straining.

Terebinthine, one pounce. Aqua vite iij. times stilled, one pounce put into your aqua vite. Aloes Cicotrinæ, one vnce. Rubarbare, one vnce and a halfe.

Let these be made in fine powder and let it stande two dayes infused, then strayne it, & put the Aqua vite so strained to your oyle and Turpentine aforesaide, then set it on the fire and let it boyle a little, till the most parte of the Aqua vite be consumed, then take the powder of Mastiches, Olibani, ana. iij. vnces. Viridis eris, Lumbricorum puluerisat, ana. ij. vnces.

Mashe your wormes first in white wine, then boyle all these

these things together a little space, then take it from the fire and sturre it till that it be colde, and so used according to arte.

Balsamum artificiae Lullij.

Rec. Terebinthine, one pounce, and a halfe. Galbani, two vnces. Aloes cicotine, Mastiches, Caryophyl, Galanga, Camomom, Nucum mustat, Cubeborum, ana, one vnce. Gummi hedere, halfe an vnce.

When all these are well beaten, mire them and distill them in a Limbecke of glasse with a slowe fire first, & receive the first by it selfe severally; then increasing the fire, a water somewhat reddish will come, and after increasing it more, an oyle of redde colour, and so doe till nothing run any more, chaunging the receiver thise. This oyle hath all the vertues of true baulme: for it sinketh in the water, and courdeth milke by and by: for if one droppe of it warme be put into a pinte of milke, it shall forthwith become courded. The first liquoz is called water of baulme, the second oyle of balme, the third baulme artificiall. The first is profitable against the running of the Eares, if two or three droppes morning and evening be put into them, also dropt into the Eyes, it amendeth the blearednes, and consumeth the teares, it doth maruelously restraine superfluous humours in any parte of the body. It taketh away the tooth-ach, if they be washt therewith, and kill the wormes if there anie in them. The third liquoz will suffer no venom, for it is an utter enimie and destruction to Spiders and Serpents, two or three drops being let drop in anie venomous biting, doe make it whole straight. If thou drawe a circle with this liquoz, and shut a venomous beast therein, it shall die rather than goe out of it. To be short, it doeth all the same things that Triacle doeth, but more effectually all things. Being poured or put upon anie Apostume, within nine daies, it healeth them, and likewise a fistula, be it neuer so ill, and also Noli me tangere, all diseases bredde of heatme and colde humors, it healeth them, if a linnen cloth dipped in it be laide upon the place where the greafe is, it putteth alwaie utterlie the palse, & all trembling of members.

bers, it strengtheneth meruailouſlie the ſinnowes, it is hotter than the firſt and ſecond, if a man put a drop of it in his hand, it pearceſh without great grieve. To conclude, it doth many other things, and all diſeaſes riſen of a cold cauſe, it healeth them, if they be it right according to art. All this is Lullius ſaying.

Aliud Balsamum Dorantij.

Rec. Ammoniacy, Opoponacy, Reſine pine, Bdellij, Maſtiſches, Galbani, Gumini eleme, Olibani, Myrrhe, Sarcocolla, ana, halfe an ounce, Xylobaſami, one ounce, Olei benedicta, Laurini, ana, j. ʒ. & ʒ. Baſami Gul. Placentini, halfe an ounce. Sanguinis draconis, Laudani puri, ana, two dragmes, Spicæ nardi, Caſtorij, Galanga, Cubebæ, Cinamomi, Cardomomi, Granorum paradisi, Corticis citri, ana, i. dragme, Olei Terebinthinæ, ad pondus omnium.

Let all thoſe be made in powder that are to be made in powder, and the gums that cannot be made in powder, let them be cut in ſmall peeces, and put into a Glaſſe beſſell with the oyle & balme afore ſayd, & let them lie in ſteape ix. dayes, then diſtill them in Balneo Mariæ, the ſpace of foure houres, then let them ſtand ſeauen dayes more, and diſtill them againe, as is aforeſayde, then ſtraine them. So haue you a precious Balme, which you may keepe to your uſe, for the curing of woundes, both in the ſimiler and inſtrumentall partes.

Balsamum ex intellina terra, noſtræ inuentionis.

Rec. Lumbricorum halfe a pound, put them in white wine to purge them one daie, then ſlit them and make them cleane from all earthie mattier, then ſtampe them ſinellie, and put to them one pinte of good Balmyſey, and one quart of Oyle of Juniper, boyle them all together till the wine be conſumed, then ſtraine it, and adde to the ſtraining.

Opopana-

The second booke of

Opopanax, Ammoniaci, ana, j. vnce. Gummi Arabicum, ana, j. vnce. Dissolued in vinegar according to art, Olibani, Mastiches, ana, ij. vnces and a halfe. Myrrhe, Sang. draconis, ana, j. vnce. Olei Hipericie, Terebinthine, ana, vj. vnces. Boracis, iiij. vnces, Aqua vite fortissime, iiij. vnces and a halfe, Croci, ij. dragmes, Terebinthinæ, xij. vnces.

Boyle all these together in a bodie of glasse, in Balneo marie, vnto the wine and Aqua vite be consumed, then let it stand twentie dayes infused, & after that boyle it againe two howers and so straine it, and keepe it to your vse.

This Baulme is most precious in woundes of nerves & lunctures of all other.

Balsamum ex Croco nostre inuentionis.

Rec. Foliorum consolide maioris, Cōsolide minoris, Mar. rubre, Cētaurij, Hiperice, ana, M. j. Florum Rorismarini, Chamamille, ana, M. f.

Let your flowers and herbes be dyle and grosse beaten, & put to them one pinte of Oleum Lumbricorum, and one pinte of Malmesey. Then let them boyle all together softly, the space of two howres in a pot verie close lye stopped, then straine it and add to the straining Mastiches, Myrrhe, ana one vnce, Olibani, Croci, ana, one vnce and a halfe, Sang. draconis, Gummi dragagant, Sarcocollæ, ana, halfe a vnce, Laudani, Castorij, Bingemi, ana, ij. dragmes.

Make all these in powder, then adde to them Oleum Terebinthine, iiij. vnces, Spice nardi, one vnce, Terebinthinæ lotæ, vj. vnces.

Boyle all these in Balneo marie, according to arte. This Baulme is most precious in woundes of the breast that perceth through into the bodie, as I haue many times proued my selfe.

Emplastrum de meliloto

M E S V A E.

Rec. Meliloti, vj. vnces, Florum chamomeli, Foenigreci, Baccarum

Baccarum lauri, Radicum altheæ, Comarum absinthij, ana. ij. dragmes. Seminis absinthij, Cardamomi, Iridis, Cyperi, Spicæ nardi, Casia, Seminis ammi, ana, one dragme and a halfe. Foliorum perfici, iij. dragmes. Hammoniacy, x. dragmes. Styracis, Bdellij v. dragmes, Terebinthinæ, one vnce and a halfe. Ficus pinguis numero, xij. Sepi hircini, Resinæ Picis, ana. ij. vnces and a halfe, Ceræ, vj. vnces. Olei sampsucini, Olei nardi, ana one pound, Confice, sic Fit decoctio, Meliloti, Foenigræci, Chamemelij, ana. q. s.

Boile these into the consumption of the halfe, then straine them and put thereto your percells finelie made in poulder, and boile them againe adding the oyles Turpentine and Gummes dissolved in viniger. Then put to the rootes and figges being well brused and well boiled together. And mixe all these together and make an emplaster according to arte. It doth mollifie all hardnes of the stomacke, liuer, spleene, and other intrailles. It doth also cease vehement dolour and paine. And healeth flatulentnesse of Hypochondria, &c.

Dia Meliloton Andromachi ex Galeno.

Rec. Nardi gallicæ, Cyperi, Iridis, Myrrhæ, ana. viij. dragmes. Croci, iij. dragmes. Meliloti, xxv. dragmes. Hammoniacy, Terebinthinæ, ana, one dragme. Cere, one hundred dragmes. Olei Cyprini, sixe vnces. Aceti, q. s. Fiat emplastrum.

This emplaster is of like vertue with that which is next before described &c.

Emplastrum ex fermento Democriti ex Mesue,

Rec. Mellis, Fermenti, ana, one pounce, Visci quercini, foure vnces, Hammoniacy in aqua fœnigræci, ant. lacte mori arboris, three vnces. Fecis olei veteris q. s. Fiat emplastrum.

This emplaster is of great vertue in drawing out thornes and thinges in any place. Also in taking out the bones broken of Cranium fractured, yea although they be fired in Dura and Pia mater.

Aliud

Aliud simile.

Rec. Fermenti, Mellis, Olei Communis, Lactis muliebris, Vitelli ouorum, ana one dragme. Fiat Emplastrum.

It doth digest and maturate inflammations, and breakesth apostumes. And if to this receit you ad Bdellium & Farina hordei, it draweth out thornes fired: yea, & so much the better if you put to it of Galbanum, dissolved in vineger. &c.

Dia Chalciteos Galeni, palmeum vnguentum dictum.

Rec. Axungie porci veteris a membranis per Liquefactionem & Colationem purgate, two pound. Olei veteris, Lithargiri triti, ana three pound. Chalcitidis vltæ, foure vnces.

Boyle all on the fire and stirre them with a stick new taken off the Date tree, (you may in the place hereof vse a sprig of the Oke) and when as it is well nere boyled, adde thereto of the tender croppes of the Date tree new gathered and cut small, foure ounces, (you may in the place hereof vse the young buds & twigs of the Oke) boyle all these vnto the thicknesse of a Cerote.

This is right good against greene wounds, pestilentiall tumours, apostumes, burnings, ruptures, contusions, and ecchymomata. &c.

Diachilon Mesuræ primæ descriptionis.

Rec. Mucaginis Seminis Fœnogreci, Mucaginis Seminis linj, Mucaginis Radicum altheæ, ana. i. vnce. Lythargyri, one vnce, and a halfe. Olei antiqui clari, three vnces.

The Lytharge must be made in most fine powder, and tempered with the Oyle. Then boyle them on a soft fier, stirring them alwayes with a Oyle, vntil they be wel boyled, and incorporate together. Then put to your muscilages and boyle them againe vnto a sufficient thicknesse.

It is good against scyrrhous of the L yuer, Splene, Stomacke, and other parts, it mollifieth all hardnesse. &c.

Alij addunt pulueris iridis, Mucaginis Meliloti, Ana, one ounce.

Then

Then it doth moze vehemently resolue and maturate,
and is a greater ceaser of dolour and paine.

Alij Olei veteris loco accipiunt.

Rec. Olei Chamemelini, Olei Irini, ana, one vnce & a halfe.
Prestantius quoque fit, Addes etiam si voles. Galbani, Ham-
moniaci Sagapeni, ana partes æqua. Diachylon gummatum
vulgus appellat.

Emplastrum Diachylon magnum Mesuæ.

Rec. Lythargyri, one pound. Olei Chamemelini, Olei Tri-
ni, Olei Anathini. ana. viij. ʒ. Mucaginis, Seminis leni, Muc-
aginis fœnogreci, Mucaginis Altheæ, Mucaginis Ficū pinguiū,
Mucaginis Vuaiū passerum, ana. ʒ. xij. ʒ. Succi, Iridis, Succi,
Scille, Succi Oesipi, Succi, Ichthyocholle, Ana dragmes, xij. ʒ.
Terebinthina, three vnces. Resini pini, Cerae flauæ, ana two
vnces. Fiat ceratum vt prius.

It doth digest and molifie all hardnesse, & therefore may
with great profit be applyed vnto schirrhous, and all other
inflammations and tumours. &c

Emplastrum Diachilon paruum Mesuæ.

Rec. Lithargyri, vj. vnces. Olei veteris, one pound. Muc-
aginis Phylli, iij. vnces. Mucaginis Seminis lini, Mucaginis Ra-
dicum altheæ ana, two vnces. Fiat vt primum.

It doth digest and maturate tumours and apostumes,
which be hot. &c.

Emplastrum ex alijs Aetij.

Rec. Cerae, two pound. Picis Grece, Medullæ ceruine, ana,
vj. vnces. Nitri albi, viij. vnces. Olei, foure pound. Allia, num. xx.

The Garlike being pilled, boile it in oile. Then straine
them, and adde to it Ware, then pitrum, & make an Em-
plaster according to arte.

It is

The second Booke of

It is of vertue against all hardnesse, apostumes, felons, bubones, fistulas, impetigines, humidas, and hardnesse of the pappes.

Emplastrum ad vulnera recentia, Called in the Enchiridion, the greene wounde plaister.

Rec. Resine, e Pino, Cere virginee, ana, ij. pounce. Resine, Seui ceruini, ana, xij. vnces. Colophonij, viij. vnce. Sarcocolle, ij. vnce. Terebinthine, halfe a pounce. Mastiches, Olibanij, ana, iij. vnces. Dragacanthi, Gummi arabici, Galbani, Ammoniaci, ana, one vnce, and a halfe. Storacis calamite, ij. vnces. Storacis liquide, foure vnces. Succorum Pyrolę vtriusque Saracenice, Diareusie, Veronice, Solisseleuij, Consolide minoris, Arthemisie, Plantaginis vtriusque, Betonice, Agrimonie, Matrisilue, Cerefolij, Saluie, Verbene, Pilosille, ana, three pounce.

Boile the iuses of these herbes, with the Ware, Rosine, Colophonium, and hartes suet on a softe fier, with coles untill two partes bee consumed. Then put to it Turpentine, and the gummes being dissolved in vineger of Roses and let them boile a space. Then put to it Stirax liquida, and Calamita, and if you will haue it sweete smelling you shall adde Moschi. ij. scruples. Straine these through a cloth and let it stande a night, and the next day make it in rolles with oyle of Roses. But if you will haue the plaster greener, put to it Succo solatri, Sambuci, Chelidonij, ana. three pounce. And boile your Plaster againe therewith, but not long.

This is an excellent Plaster in all greene and freshe woundes. For it doeth mundifie incarnate and consolidate without maner of fentes, it is of merueilous vertues, and therefore had in these dayes in moze frequent vse. There be diuers compositions: but in my opinion this is the best.

Emplastrum Iudaicum, called the Iewes Plaster.

Rec. Cere alba, foure pounce. Resine de Pino, Resine Terebinthine, ana, two pounce. Olei rosati, one pounce. Mastiches,

Stiches, Oliban, Myrrh, ana, two ounces, Rosarum Recentium, iij. ounces, Vini rubei, iij. pound, Succorum pinolæ, Diapensie, Matrisiluzæ, Saracenice, Herbae tuncici, Soliflesquij, Bethonice, Consolidæ minoris, Fumariæ, Plantaginis vtriusquæ, Valeriane, ana, q. s.

Use the hearbes, and take of the iuyces, and put to the wine, and boile them on the fire a good space. Then straine them, and put to it so strained, Ware, Turpentine, Rosen, and Oyle. Then seeth the Roses, after straine them, and put them in a kettle, and seeth them five or six houres, then take it from the fire, and let it be colde. The next day following melt it againe, and adde to it Mastike, Frankensence, and Myre, and suffer it a little to boile together, after let it cole, and make it in rolls.

This emplaister hath the lyke vertues that the other going before. For it doth mundifie, incarnate, & consolidate all greene and fresh woundes, and healeth them without Tenters.

Emplastrum attractium Brunf.

Wicenis.

Rec. Apostolieon Nicolai, two ounces, Magnetis orientalis, halfe an ounce, Pinguedinis leporine, Olei canibus, ana, 3. ℞. Melt the oile and Hares grease together, and then put to it the parcells abouesaid, and make therof an emplaister according to arte.

This Emplaister is much praised in drawing out anie yron fixed in woundes, as arrowe heades, maile, shotte, or such lyke.

Emplastrum Gratia Dei vocatum.

Rec. Terebinthinæ, halfe a pound. Resine, one pound, Cere albæ, foure ounces, Mastiches, five ounces, Betonicæ, Verbanæ, Pimpenelle, ana. m. j.

Stampe your hearbes in a mortar, and put them into a quart of white wine, and boile it well till the third part be consumed,

consumed, and that it haue taken the strength of the hearbs, then put in your Gallare, Rosen, and Mastike, into the iuyce and wine, and let them boile on the fire untill the licour bee consumed, euer stirring, and then take it off the fire, and put in the Turpentine, and boile it till it come to the foyme of a plaister, enermore stirring it well.

This plaister is good for wounds that be cut or byused, & for broken bones, and toyns that hath bene out, and for ach and paine that cometh of colde.

Emplastrum de Minio.

Rec. Olei rosati, one pound and a halfe. Vnguenti Populei, Olei Myrtillorum, ana, foure ounces. Pingued. Caponis, two ounces. Sapi vitulini, Vaccini, ana, halfe a pound. Axungia, seven ounces. Lichargyri auri, Argenti, ana, three ounces and a halfe, Minij, Ceruse, Terebinthinae, ana, foure ounces. Ceræ, that is sufficient.

Let all these be boiled together till it be blacke, & make thereof a plaister according to art. This plaister is good for olde sores, and is the experiment of Ioannes de Vigo.

Emplastrum Tripharmacum.

Rec. Olei communis, foure pound. Lychargyri auri, two pound. Aceti fortissi, halfe a pound.

Make hereof a plaister according to arte, Emplastrum Tripharmacum is good to make flesh grow in wounds, and to consolidate and heale them.

The making of the white Muscilage plaister, called
Diachilon paruum.

Take first your Marsh mallowe rootes and wash them, and picke them verie cleane, then slice them, and take forth the pith, and cast it awaie, and cut the other in small peeces, then stampe them in a mortar, and put two pound of that same god haue stamped into a new earthen pot, with foure ounces

ounces of Linseed, and foure ounces of Fenegreke seeds in grose powder, then put vnto them one quart of white wine, and one quart of water, and sturre it well together, & let the water be boiling hot. When let it stand foure or five daies, til it come to perfect muscilage, euerie day stirring it, then straine it, and so you haue your Muscilage.

Then take Litarge of Lead in fine powder, searfed thorough a fine cloth, five pound, common oyle foure quartes. When boile the oile and Litarge vpon a soft fire till it fall to a plaister, & then take a pint of your muscilage, & put it in by little, & little least it run ouer the pan, and alwaies stur it, so doing til you haue put in one quart of your muscilage, and so sturre it a little space after till it beginne to waxe colde, then put in the rest of your muscilage, when you perceine it will not runne ouer the pan, and so continuallie labour and worke it till it be verie white, then make it vp in rolls, and keepe it to your vse.

Emplastrum muscilagineum ad Resoluendum

humores in tibijs, and about the knees

This plaister was deuised for king Henrie the eight, to amend the swelling in his legges.

Take the rootes of Marsh mallowes, wash and picke them cleane, then slit them, and take out the inner pith, & cast it awaie, and take the vpper faire white part, & cut them in small peeces, and bruse them in a mortar, and thereof take one pound and put them in a new earthen pot, & adde thereto of Linseed and Fenegreke, ana, two ounces a little brused in a mortar, then put thereto Dalmsey and white wine, ana, a pint, and stirre all together, and let them stand infused two or three daies, then set them ouer a soft fire, & stirre it well till it waxe thicke and slimie, then take it off, and straine it through a new canuas cloth, and thus haue you your Muscilage redie, & the to make your plaister. Take fine oile of roses, a quart, & wash it well with white wine & rose water. Then take the oile cleane from the water and wine,

R. ii.

and

and set it ouer the fire in a brasse pan, alwaies stirring it, and put thereto the powder of Lithargyri auri, Lithargyri argenti, ana, eight ounces. Ceruse, sixe ounces, Corallo rub. two ounces, Boli armoniaci, Sangui. draconis, ana, one ounce.

And in anie wise make them in fine powder searsed, then put them into the oile ouer the fire, alwaies stirring, and let not the fire be too bigge for burning of the stuffe, and when it beginneth to ware thicke, then put in of the sayde muscilage x. ounces, by little and little at once, or else it will boile ouer the pan, and when it is boiled inough, ye shall perceiue by the hardnesse or softnesse thereof, if thou drop a little of it on a dish bottome or cold stone, then take it from the fire, and when it is nere colde, make it in rols, and lap them in parchment, and keepe them to your vse.

Emplastrum pro Chameleontiasi nostre inuentionis.

Rec. Axungia, two pound. Aquarum rosarum, Plantaginis, foure ounces.

Wash it well untill the waters be consumed in the said grease, then let it stand the space of foureteene daies, then put it in a pan ouer the fire, and adde to it Oleum Rosarum, one pound. Minij, two pound, Aceti optimi, one pinte.

Let the barks of Elme remaine in the vineger foure daies infused, make heereof a plaister according to arte. This is a good plaister for scabs or biles, and for soze legges, and many other things, for it mollifieth and healeth gentlie, and taketh awaie paine. This plaister I did vse much in ill scabs of Chameleontiasi, after they were mundified with Mercurie precipitate. And also in swelling of ioyntes, and in the gout, and with this plaister I did great cures after the bodie was well purged, and if thou wouldest haue it to heale an olde sore, thou must put in a little Coperasie in Powder into the Vineger, and so boyle it according to arte.

Emplastrum Ceruse.

Rec. Oli. rosati, two pound, Axungie loti in aqua rosacea & vino, one pound.

Ceruse

Ceruse puluerisatæ, foure pound, *Cera albe*, eight ounces.

Melt your Ware with your Oyle and Hogges grease, then put in your Ceruse in fine powder by little and little, and stirring it, for burning to the bottome, untill it come to the forme of a plaister, the which you maye knowe by dropping some of it vpon a stone, or a dish bottome, untill you haue it according to your minde. This plaister is good for scabs in an euill hot complexion, for it doth quicklie drie them and skinne them. If you wash it with white wine, it will be much better.

Emplastrum Calificens.

Rec. *Olei rosati*, one pound, foure ounces, *Cera alba*, one pound, *Ceruse Venete pul.* one pound.

Boile all these vpon a soft fire, euermore stirring it till it come to the forme of a plaister, and then take it from the fire, and in the cooling put in of Campher, two dragmes, in fine powder, and make it vp in rolles.

This plaister is good to cicatrise vlcérations, after they be well mundified and incarned. It is good to drie vp scabs when the bodie is well purged before.

Emplastrum de specibus, for ach and paine in the shoulers, armes, or some other places of the bodie.

Rec. *Resine*, *Peresine*, *Cera albe*; ana, one pound. *Colophonij*, eight ounces, *Vini rubei*, two pound. *Cariophyllorum*, *Maceris*, ana, one nunce. *Olibani*, foure ounces, *Mastiches*, ij. ounces, *Myrrhe*, one ounce. *Croci*, halfe an ounce.

Make those in fine powder that are to bee made in powder, and boile your Rosen, Perrosen, and Ware, with foure ounces of Deare suet, and straine it thorough a Canuas cloth. Then set it on the fire againe untill it boile, and when it boyleth take it from the fire, and put in your powders, and stirre it untill it bee colde, and in the cooling, put in the red wine, & labour it together, and make it vp in rolls: & if you adde vnto this one ounce of the leaues of Rue, dried & made.

The second booke of

made in fine powder, and fullie searled, it is then good for Sciaticus, and other cold sicknesses of the ioynts, if the body be wel purged before with pills of *Hermoadactolio*, or other purgations meete for the same purpose, &c.

Emplastrum Ianuafenee.

Rec. *Succi plantaginis*, *Betonice*, *Apij*, ana, one pound. *Plicis*, *Perrosine*, ana, one pound. *Cere*, two pound. *Terebinthine*, foure ounces. *Rorismarine puluerisate*, two ounces.

Melt your Pitch, Rosen, Ware and Turpentine, together with *Olei Ienupere*, two ounces. Then put in your powder of *Rosemarie* leaues, stirring it verie well, then put in your iuyce by little and little, euer stirring it continual, lie vntill it be colde, and so make it vp in rolles, and keepe it to your vse.

Emplastrum nigrum I. de Vigo & D. Buttes, for blistering, burning, ach, and excoiation, comming of hot humours, and for all hot vicerations.

Take vnslacked Lime, and quench it in water seauen times, and in white wine two times, then take of that powder one ounce and a halfe, *Cerusa*, i. 3. *Tutie*, i. 3. *Olei rosati* one pint. *Sepi vitulini*, foure ounces. *Succi plantaginis*, *Solatri*, *Lactuce*, *Centumnodij*, ana, two ounces.

Boile all these iuyces with the oile and the suet on a soft fire, till the iuyce be consumed, then put thereto *Vnguenti rosarum*, one ounce, *Cere alba*, one ounce. And boile them againe, euer stirring it with a splatter, then put there, to your *Veneralls* finelie powdered and searled, and when it is sufficienly boiled, take it from the fire, and when it is colde put it in a mortar of *Brasse* & labour it well, then put it in a bore, & thereof make your plaister on a linnen cloth.

Emplastrum Iacobi.

Rec. *Lapidis calaminaris*, *Terre sigillata*, *Lapidis Lazuli*, *Lapidis sanguinaris*, *Lapidis Emur*, ana, two ounces. *Sanguis*

guinis draconis, Boli armeni, ana, two ounces. Let all these be made in verte fine powder, then take oyle of roses, a pinte, and set it over a soft fire, putting thereto Cere alba, halfe a pound, Sepi cernie, foure ounces.

And when they be relented, put thereto all the pouders, and stirre them well, and let them boile a little while, then take it downe, and put thereto in fine powder Mastiches, Olibani, ana, one ounce. And stirre it, and when it is almost colde, put therto Terebinthing, two ounces, Camphore, two dragmes. Made in fine powder and well mingled, and make it vp in rolls according to art, and keepe it in Leather, and so vse it.

Emplastrum desiccantium, D. Butti militis

& medici Regij.

Rec. Olei rosati, eight ounces. Ceruse, Mindij, ana, two ounces. Lythargiri auri, Sanguinis draconis, Boli armeni, ana, one ounce, Camphore, two dragmes.

Make all these Minozalls in fine powder, & mire it with the Oyle, and set it on a soft fire, alwaies stirring it, and let them boile till they be plaister like, & so make it vp in rolls. And if you adde vnto this plaister in the boiling therof iiii. ounces of vineger of roses, it will be much better to drie, & defend the members from accidents. This Plaister was well proued by King Henrie the eight, for his legges.

Emplastrum Gul. Firmigonis militis.

Rec. Lithargiri puluerisate, j. pound. Olei rosati, one pinte. Cere albe, two ounces. Myrrhae, Olibani, ana, one ounce. Vin albi, Vrine, ana, halfe a pound. Aceti albi, a quarter of a pound. Solatri, Plantaginis, ana, in se.

Put the hearbes into a mortar with the vineger, and stampe them together, then wring out the iuyce, and put into the Vineger and Wine aforesayde. And thus you must make your Plaister. Melt your Oyle and Wax together in a faire Panne, and let it boile. When by little and little put in your Litharge, ener stirring it.

P. iiii.

After

The second booke of

Afterwardes put in your iuyces by little and little, till you haue put in all. But be sure it be well stirred, for sitting to the bottome. Your panne must be of a good bignesse, or else when you put in your iuyces, it will boile ouer the panne. So let it boile, euer stirring it well till the iuyces be consumed. Then last of all put in your Myrhe and Olibanum in fine powder, and stirre it till it be colde, if it be too harde, make it softer with Oyle of Roses, if it be too soft, boile it a little more according to art.

This is a speciall plaister for all kindes of vlcérations, as well of the legges, as of other partes of the bodie, for it hath vertue alteratiue, resoluatiue, and exicative. Prouided alwaies that the bodie be vniuersallie purged, as often as neede shall require.

Cerates.

Hydreleon Galeni.

REc. Lithargyri argenti, one pound. Aqua limpida, Olei puri, ana, two pound.

The Litarge is to be made in most fine powder, and the other to be stirred in a morter of stone, then boile them on a soft and small fire of coales. The medicine is to be made in the Sunne the daie being faire, that it may be the whiter, and the fire vanishing, you must still adde freshe coales, and boile these to the substance and thicknesse of a Cerote.

It doth refrigerate, and therefore is the vse of it profitable in vlcers, for it suffereth not anie humour to flowe vnto them, & that which is already come, it putteth to the partes adiacent. Therefore it healeth itchinges and malignant vlcers, &c.

Oxelaum Galeni.

Rec. Lithargyri argenti, one pound. Olei veteris, Aceti optimi, ana, ij. pound. Confice vt supra. Componitur etiam ex Olei et Aceti, ij. pound and ℥. vel ex singulorum, three pound, tunc enim nigrius est et valentius.

It doth drye Fistules which haue not callus indurated, and cureth them. And doth coagulate greene and bloudy wounds and such like. &c.

Oenelæum Galeni.

Rec. Lithargyri argenti, one pound. Olei clari, Vini albi optimi, ana two pound. Coque et confice vt superiora.

It doth exciccate and drye, therefore it is good against fluxes and reumatike passions, and it healeth greene wounds.

Dia piperco Galeni.

Rec. Lithargyri argenti, Cerusæ, ana one pound. Olei communis, two pound. Cere vj. vneces. Terebinthine, three vneces. Thuris, one vnce and a halfe. Aluminis, vj. dragmes. Piperis, iij. dragmes. Fiat in hunc modum.

The Lycharge being made in fine powder, is to be boyled with oyle, in the Sunne and so long it is to be boyled untill it come to the substance of an Emplaster and will not cleave to your hands. Then put to it the Turpentine and ware. These being molten, you shall ad your Pepper, Frankensence, and Alooe, made in fine powder. Last of all, put to your Ceruse also finely powdered. And alwayes in the boiling styre them, and boyle them so long until they come to the thickness of a cerote.

It healeth the vlcers and sores in olde men, and those that haue soft bodies. And further, cureth all vlcers which will not without difficultie come to a cicatrice.

Ceratum e Cerusæ.

Rec. Cerusæ, one pound and a halfe. Olei Rosati, ij. pound. Cere candidæ, iij. vneces.

The war being molten, put to the Ceruse made in fine powder and boyle it so long until it cometh to blacke colour.

It cureth burnings, skaldings, erysipelas scabbes, and all hot vlcers. &c.

Ceratum e Betonica, Capensis.

Rec. Terebinthine, Resine pini, Cere flauæ, Ana iij. vneces.

N.v.

Beto-

Beronic pulsatilla, yon vntē. Mastiches, Thuris, ana halfe an
vntē. Mithra fourē dragms. Misc. Fiat malagma capitis vul
nera vtile.

It is right profitable in paines of the head, &c.

Ceratum Capitate, Carpenfis.

Rec. Terebinthine in vino maluatico, sepius lotē, Resinæ
pini, Cere albe, ana three ounces, Mithra 3. i. & halfe, in vino
The Turpe at the, wosten, and ware being molten, put to
the pulme made in a reponder. Boile them on the fire, &
stirre them continuallie. Then put these in a cleane vessell
in which is rose vineger made of Malualey, soure pound.
Let all these macerate viii. houres, then expresse & wring
out the vineger with your handes, and keepe in a vessell of
glasse to the vse, &c.

Ceratum è styade, Magistrale.

Rec. Styadis liquida, soure ounces. Cere flaua, two oun
ces. Thoris, Myrrha, ana one ounce. Fiat ceratum secundum
antem. It doth all waie and cease hard tumours of nerves
and toynles, and other partes.
Rec. Galbani, Opopanacis, Aeruginis, Thuris, Aristolochia
longe, Mastiches, Myrthe, ana one ounce, Hammoniack, ounce
ij. dragme, ij. Cere, eight ounces. Lithargij, Olei communis, a
na, xviii. ounces. Bdellij, two ounces. Lapidis calaminaris, La
pidis Hematidis, ana one ounce. Olei absinthij, soure ounces.
Terebinthine, six ounces. Fiat Ceratum.

It doth mollifie, mundifie, & conglutinate, & therefore is
right excellent in Apostumes, tumours, and such like. It is
profitable in fisthie vlcers, & doth conglutinate wounds, &c.

Rec. Cadmie preparate, Chalcedidis vntē, ana, xvj. dragms.

Cere, lxxx. 3. Colophonie, lxiii. 3. Olei myrtini, j. pound.

It is right excellent in vlcers which will not easilie
come to a cicatrife, for it doth cicatrife all vlcers, &c.

Ceratum de Salice.

Rec. Misv, Aluminis rot. Chalcedidis, Melantherij, Aeru
ginis, Aluminis scissilis, Gallarum accerbarum, ana six ounces.

Ceru-

Ceruse, Cere, Resine fracte, Picis brutie, Bituminis, Olei
omphacini, Foliorum salicis teneriorum, ana, two pound.

Boile the leaues in strong vinegar, then dyle them, and
melt them in fine powder. Then melt that is to be molten,
and in the cooling adde your other parcelles made in fine
powder, and make a cerote according to art, *et ad huc ratio*
It doth heale vlcers malignant, and those that will hardlie
be cured. Also Cerisipelas, & many other effects, as fistules
and other.

et ad huc ratio
Barbarum paruum Galeni.

Rec. Picis nigre, Cere, Resine pini, Picis Grece, Bitumi-
nis, ana, one pound. Lithargyri, ten dragmes, Ceruse, Aerugi-
nis, ana, five dragmes. Opoponacis, iij. dragmes. Olei, ix. ℥.

Let those things that are to be beaten, be put in a mortar
with strong vinegar. The other must be molten on the fire,
and all being mixed together, boile thein so long, untill they
cleane to thy fingers. But if thou wilt haue it apter to cease
dolour and paine, adde to it of Succo hyoscyami, Opij, ana,
halfe a dragme.

It is good to be vlsed in greene and fresh wounds, and for
the biting of mad dogs. Also for inflammations of the ioynts,
and the gout, &c.

et ad huc ratio
Barbarum magnum Galeni.

Rec. Picis, viii. pound. Cere, vii. pound, viii. ounces. Resine
pini, v. pound, foure ounces, Bituminis, foure pound. Olei, one
pound, vi. ounces. Lithargyri, Ceruse, Aeruginis, ana, iii. oun-
cis, Thuris, vi. ounces. Aluminis liquidi, i. ounce & a halfe, A-
luminis scissilis, foure ounce. Opoponacis, Squammę eris, Gal-
bani, ana, xij. dragmes, Aloes, Opij, Myrrhe, ana, foure dragms.
Succi mandragore, vi. dragmes. Terebintine, ii. pound. Ace-
ti, five pound.

Make of these a cerote in such sort as is mentioned in the
description going before, *et ad huc ratio*

It is of the like vertues with the other going before, but
that where the other is vlsed in small wounds, this is ap-
plied to great wounds, &c.

et ad huc ratio
Galenus

Rec. Cere, c. dragmes. Terebintine, cc. ℥. Squammę eris,

Aerugi-

The second booke of

Aeruginis, Aristolochie, Thuris, Salis ammoniaci, Aeris vsti ana. viij. dragmes. Aluminis vsti, vj. dragmes. Myrrhæ, Aloes, Galbani, ana. xij. dragmes. Olei veteris, x. vneces.

Boyle them as befoze, & your hands being wet in strong Vineger, make of these rolles according as is the vse, and after put them in Vineger ten dayes. Then take them out, and reserue them to thy vse.

It is found good for the head. Also against olde and rebellious vlcers, and those that be bloudie. &c.

Ceratum viride Machetionis ex Galeno.

Rec. Olei Rosati omphacini. vj. vneces. Aristolochie, Galbani, Opoponacis, Hammoniacy, Aeruginis, Myrrhæ, Iridis, Ana one vnice. Terebinthinæ. vij. vneces & a halfe. Cerae tantundem. Fiat ceratum.

It serueth for all greene wounds, it putteth away inflammations, and is vled in vlcers of the eyes and eares. It doth ingender flesh on the bones that are bare, and without flesh, and doth conglutinate speedely. &c.

Dia dictamini Galeni.

Rec, Olei veteris, two pound and a halfe. Lithargyri, one pound and a halfe. Aeruginis, one vnice. Squammæ æris, sixe dragmes. Colophonie. vj. vneces. ij. dragmes. Pollinis thuris, one vnice and a halfe. Hammoniacy, two vnices. Aeris vsti, j. vnice. Diphrygis, Gentianæ, Ana. vj. vnices. Propoleos, Aloes, Ana. j. vnice. Galbani, one vnice and a halfe. Aristolochiæ rot. Dictamini cretens. Ana. j. vnice. ij. dragmes. Cera. xxv. dragmes. Confice in hunc modum.

Boyle your Litharge and oyle so long together untill that they are well boyled. Then put to your Ergo, and Squamma æris, let them a little boyle. Then take them from the fier, and adde to them Rosine and Ammoniacy dissolved in Vineger, then put to Ware and es Vstum. Then boyle them againe untill it cleaue not to the hands.

It is good in greene wounds, punctures of the Pernes, olde vlcers, and those that will hardly cicatrize, also for Apostumes, felons, and scirrhoues.

It doth weeth out thinges fired, as arrow heads, darts, thornes, &c. and is of great force against all venemous biting and stinging &c.

Ceratum Oxycroceum Nicolai.

Rec. Croci, Picis nigrae, Picis graecae, Ceræ, ana, iij. vnces. Terebinthinæ, Galbani, Hammoniacy, Myrrhe, Thuris, Mastiches, ana one vnce iij. dragmes.

The Galbanum and Hammoniacum dissolved in Vineger, must be boyled vntil the Vineger be consumed. Then adde the Pitch, Mare, Terebinthine, all molten, after the Mastike, Frankensence, and Myrrhe, made in fine powder. Boyle these vntill they come to a conuenient thicknesse, then put in colde water, and depresse it out againe. After with oyle of Bayes your handes being annointed, worke this Cerote, and extend it out. Last of all, your Saffron being made in fine powder, mixe them together, and make a Cerote as arte requireth.

It is vsed in fractured bones, and in the parts of the boeie, where as dolour and paine is.

It doth mollifie and make soft all hardnesse, and putteth it away quite. &c.

Ceratum ex pelle arietina Arnoldi
de villa noua.

Rec. Lithargyri, Lapidis Liæmatitis, Sanguinis draconis, Boli armeni, Opij, Mastiches, Hammoniacy, Mumia, Galbani, Thuris, Costi, Lumbricorum, ana halfe a dragme. Picis nigrae, Picis graecae, Ceræ albæ, Ceræ rubæ, ana one dragme. Radicum maioris, consolidæ, minoris, Ana. iij. dragmes. Rosarum rubrarum, Myrrhæ, Aloes, ana. xvij. graines. Succu hypocistidis, Gallarum immaturarum, Balaustrorum, Aristolochia rot. ana. vj. dragmes. Vilci quercini, Terebinthinæ, ana two dragmes. Sanguinis hominis rufi, ix. vnces. Fit autem in hunc modum.

Boyle the Wethers skinne whole, with the haire and wolle on it in water, vntil it be brought into the substance of Giew, which thou shalt straine. Take of this strained
one

The second Booke of

one pound put in a new vessell, in which the *Wifolto* is resolved, then put in the *Lumbzikes*, after the *Ware*, *Turpentine*, and *Mastike*, these being molten, put to the *Gums* dissolved in vinegar, and boile them to the thicknesse of a *Cerote*. Last of all adde the powders, and mixe them together, and make them in rolls, &c.

It is of great force & vertue in ruptures, and hath oft bene tried, &c.

Ceratum D. Guli. Buttes Medici, ad vlcera antiqua &

Phagedenica.

Rec. *Olei rosati*, *Cera alba*, ana, one pound. *Cerusa*, one pound and a halfe.

Set the oyle and ware together on a soft fire, and relent the ware with the oyle, then put in the *Lead* in fine powder, ever stirring it well untill it ware blacke. Then take it from the fire, and dip therein peeces of fine linnen cloth, and thre is your searecloth.

Ceratum D. Gul. Buttes Medici, ad iuncturarum dolores.

Rec. *Olei rosati*, foure ounces. *Aceti*, two ounces. *Lithargyri*, *Cerusa*, *Cera alba*, ana, one ounce. *Scorie ferri preparata*, fixe dragmes.

Set the oyle over the fire, and put thereto the vinegar, & boile the on a soft fire till the vinegar be cleane consumed, then put in all the foresayd thinges finelie powdered & seared, ever stirring it till it be plaister like, then dip in your cloutes, and when they be colde stripe them with a flake stone, and make them smooth, and vse them.

Ceratum viride Iamarici.

Rec. *Olei rosati*, halfe a pound. *Sepi bubulini*, one pound. *Celidonij*, allaluay, otherwise called sorrell de boies, vel panus conkelle, *Lybistlici*, *Thymi*, *Saluia*, ana, three ounces. *Cera*, *Terebinthina*, ana, two ounces. *Virides eris*, *Aloes*, ana, one ounce. *Mastiches*, *Olibani*, ana, halfe an ounce.

Stampe all your hearbes with your oyle and fallowe, & let

let them stand by the space of eight or nine daies, then boile them till you haue taken the strength of the hearbs, and put thereto first your ware, & let it boile till the ware be molten, then take it from the fire, and adde therunto all the rest of your things in verie fine powder, and last of all, when it is almost colde, put in your coales, continuallie stirring til it be colde. This ointment was made by the noble Chirurgeon Iamaricus, and is of most excellent operation.

Trochisce and Pouders.

Trochisci Andronij ex Andromacho.

Rec. Florum mali punici, ten dragmes. Gallæ omphacitidis, viij. dragmes. Myrrhæ, Aristolochiæ, ana, foure dragmes. Calcanthi, Aluminis scissilis, Myfi, ana, two dragmes. Formentur trochisci cum Sepæ, q. s.

It is good in greene wounds, it healeth fistules, corrupted bones, and taketh awaie all superfluous flesh, and is approved in eating vlcers called Phagedenica.

Trochisci Polyide ex Andromacho.

Rec. Florum mali punici, ten dragmes. Aluminis scissilis, three dragmes. Thuris, Myrrhæ, ana, foure dragmes. Calcanthi, two dragmes. Fellis taurini, sixe dragmes. Aloes, viii. ℥. Formitur pastilli cum vini austeri. q. s.

It hath the like vertues and properties with the Trochisce before described.

Trochisci Mesue.

Rec. Aluminis scissilis, Aloes, Myrrhæ, Calcanthi, ana, sixe dragmes. Croci, Crocomagmatis. ana, iij. dragmes. Florum maluorum granatorum domesticorum, foure dragmes. Formentur pastilli cum vini odorati et mellis, ana, q. s.

This Trochisce hath many vertues, and serueth diuerse vles in Chirurgerie, it both relaxe and maturate, &c.

Trochisci

The second Booke of

Trochisci de Minio erodentes Ioannes de Vigo.

Rec. Medullę panis non cocti benę fermętati. iiii. dragmes.
Sublimati electi, one dragme. Minij, halfe a dragme. Aquę
Rosarum. q. s.

It taketh away all superfluous and spongiours flesh in
bleers, it mundifieth filthie blcers, it mollifieth Callus, and
doth meruailously heale and cure fistules. &c.

Trochisci D. Gul. Cuninghami Medici.

Rec. Balauſtiorum, Aluminis scifs. Sanguis. Draconis, Ma-
ſtiches, Mumie, Thuris, Myrrhe, ana one dragme and a halfe.
Lithargyri auri, Cerusę venetę, ana one dragme. Centaurij
minoris, Helenij, Aristolochię rot. ana halfe a dragme. Croci,
two scruples. Boli armeni præparati omnium pondus.

Make all these in most fine powder, and with plantaine
water, and Aqua vite (in which is dissolued of good Triac-
le, two drammes) bring them in to Trochisse, according
to arte.

This Trochisse made in powder & tempered with plantaine
water, and layed on spleagants, doth put away in-
flamations, ceaseth fluxes, cureth herpes both esthiomenus
and miliaris, also Erysipelas.

Further, in olde and maligne blcers which will not ci-
catrize, it doth both mundifie them, incarnate and make a
perfect cicatrize, it hath many other vertues, which the Chi-
rurgion vsing it rightly, shall easely perceiue. &c.

Puluis.

Puluis contra scabiem communis.

Rec. Sulphuris flauis, Cumini, Baccarum lauri, Staphidis
Agrię, ana one vnce.

Make hereof a powder, and whę you will vse it against
the scabbes mixe it with oyle of Roses.

Alius Nicolai efficacior.

Rec:

Rec. Lithargyri, Hellebori nigri, ana, i. ounce. Sulphuris, Nitri, Maiorana, ana, two dragmes. Make these in fine powder, and vse it as befoze, &c.

Puluis Cephalicus Lucij ex Galeno.

Rec. Iridis, foure dragmes. Aristolochiæ rot. Pollinis thuris, ana, two ℥. Corticis radicum panacis, iiii. ℥. Fiat puluis.

It healeth those painfull sores called Nomæ.

Alius Tryphonis.

Rec. Corticis picæ, Squammæ eris, Punicis combusti. ana, vi. ℥. Thuris, Iridis, Aristolochiæ rot. Resine pini frictæ, ana, iiii. dragmes. Aloes, Myrrha, ana, two dragmes.

Make these in fine powder. It is verie good to take away the scales of corrupted bones, &c.

Alius eiusdem ad omnium hæmorrhagian.

Rec. Thuris, j. ounce. Aloes, halfe an ounce. Fiat puluis.

This powder must be mixed with the white of an egge, and the haire of an hare small cut, and applie it to the place whereas the fluxe of bloud is, &c.

Puluis incarnans, & sanguinem restringens,

Ioannis de Vigo.

Rec. Aloes, Myrrhe, ana, i. dragme. Sarcocollæ, one dragm and a halfe. Thuris, Pollinis farinæ, ana, two dragmes. Sanguinis draconis, Terræ lemniæ, ana, two dragmes and a halfe. Tutie, Lithargyri, Tragacanthæ, ana, j. dragme. Fiat puluis tenuis.

This powder doth incarnate and cease the fluxe of bloud, and therefore the author gaue it the same name.

Puluis causticus sanguinem comprimens Galeni.

Rec. Chalcitides, c. scruples. Chalcanthi, l. scruples. Misys torrefacti, xxv. ℥. Aeris vsti, xij. scruples & a halfe, Fiat puluis.

D.

This

The second booke of

This powder taketh awaie pꝛoude and spongieous flesh,
it stateth the fluxe of blond, and maketh an asher, for it is a
potentiall canterise, &c.

Præcipitatus Ioannes de Vigo.

Rec. Salis nitræ, one pound and a halfe. Vitrioli romani, A-
luminis, ana, one pound.

Distill these by a Limbeck, and take of this water one
pinte, of Argente viue one pound. Put these in a Glasse,
still with his Receptorie well luted, Cum luto sapientie,
and still it so long untill the glasse ware redde. Put awaie
the water and the Argente viue, that is combust (which the
Alchymists call Præcipitata) make in fine powder vpon a
marble stone, then mire him with his water againe, and di-
still him as before. Then breake the Glasse and take him
out, and make him in fine powder. After put him in some
vessell of Brasie, and with a slice also of Brasie sturre it,
beeing on a sharpe and greate fire, untill it looke lyke redde
Lead. &c.

Alius rubeus Brunsvicensis.

Rec. Matris perlarum combust, Pompholigos, Lithargy-
ri, Boli armeni, Terræ sigillatæ, Sanguinis draconis, Aeruginis
eris, ana, one ounce. Caphuræ, one dragme. Make these in fine
and subtil powder. This is a right perfect ericative powder,
and will not suffer superfluous or ill flesh to growe in the
wound.

Alius pulvis rubeus eiusdem.

Rec. Sanguinis draconis, Olibani, Aloes hepaticæ, Sarco-
collæ, ana, one ounce. Ilios, halfe an ounce. Fiat Pul-
uis.

This powder is vsed in staunching of blond in wounds,
and is also incarnative.

Pulvis

Puluis Longobardorum.

Rec. Sanguinis draconis, Bolie armeni, Terræ sigillatæ, ana, one ounce. Balaustiorum, Acatie, Hypocisthidis, Nucum cupressi, ana, one ounce and a halfe. Mumie, Mastiches, Thuris, ana, two dragmes. Sang. humani combusti, one ounce. Pilorum Leporis combusti, three ounces. Fiat puluis.

It is excellent in letting of the fluxe of bloud, and doth also conglutinate wounds, and ioyne their sides together, &c.

Puluis ad sanguinem sistendum.

Rec. Sanguinis draconis, one ounce and a halfe. Olibani, two ounces. Mastiches, one ounce. Aloes hepaticæ, vi. dragms. Sarcocolle, five dragmes. Iridis, Pulueris molaris, ana, ounce, &c.

Make all these in fine Powder, and keepe it in a Glasse. This Powder doth restraine the blæding of wounds, if they be stitched according to the arte of Chyrurgerie, and layed vpon the wound with mixed the white of an egge, & a little græne Balme laied vpon lint, and so applied to the wound, it maketh the flesh to grow together in short time, and keepeth the wound from putrefaction and paine, and such like accidentes, &c.

Puluis Lanfranci pro eodem.

Rec. Olibani, two ounces. Sanguinis draconis, Boli armeni, ana, one ounce and a halfe. Mastiches, Pulueris molaris, ana, halfe an ounce. Aloes cocotrinæ, three dragmes.

Make all these in fine powder according to art, and keep them in a glasse, and mire it with the white of an egge and græne balme when you will vse it, as is aforesaid.

Puluis restrictiuus.

Rec. Pulueris molaris, Farinæ Hordeacæ, ana, sixe ounces. Gummi dragaganti, Gummi arabici, Olibani, ana, two ounces. Mumie, Boli armeni, ana, one ounce.

D. ii.

Make

Make all these in fine powder according to arte. This powder is good for broken bones of the legges, armes, or any other place of the bodie, and when you doe minister it, it must be mingled with the white of an egge, well beaten together, and it must be spread vpon a linnen cloth double. And when you haue reduced and put the bone that is broken into his right place againe (so that it stand even and straight, as it did before) you may applie this medicine vpon it, or round about it, as the cause doth require, laying the member even vpon a board, or vpon some thing made for the same purpose. But you must be sure to defend the member with a good defensiu that no euill accidents come vnto it, and see that the member be verie wel splented, with good and conuenient splents, and take heede that you binde not the member too straight or fast, least you stop the course of the liuelie spirites, and so the man maye both lose his member and his life. This powder may lie on to the seuenth daie or the tenth daie, if there come no euill accidents, and then refresh it againe as you did before, and if any accidents come to the member, you must remoue it the soner, and anoint it with warme oyle, as is aforesayd. This powder is good also for wounds, for it stoppeth bleeding, and maketh the wound quicklie to consolidate if it be laied vpon the other two powders aforesaid, or on either of them in manner of a plaister, when they are mingled with the greene balme, as is aforesaid in their places.

Cataplasma D. Gul. Buttes

ad Phlegmones.

Take a fat peece of Meale or a Capon, and boile it in water and white wine, then straine it from the flesh and set the same licour over the fire againe, and put thereto Maluaram, m. two, Foliorum Violarum, Solatri, ana, m. one,

Boile

Boile them till they be soft and tender, and then take it from the fire, and polve alwaie the licour, and stampe the hearbes fine in a moztter, and put thereto Barlie meale as much as shall suffice to make it like a Cataplasme or Pulvis according to art.

Cataplasma eiusdem ad dolorem sedendum.

Rec. Maluarum, Fol. Violarum, ana. m. ij. Florum Chamomille, Foliorum rosarum, ana. m. j.

Boile all these in milke till they be soft and tender, then put them in a moztter, and stampe them small, & put thereto Vnguenti rosarum, Vnguenti populij, ana. j. 3. and a halfe. Vitella ouorum, numero. ij. Farinae hordei, two ounces.

Incorporate all these together, and when you shall occupie it, spread it thicke on a cloth, and warme it against the fire, and if there be anie hard indurate mattier in the member, then put thereto the Decoction of Marsh mallow roots and Seminis Psyllij, ana. halfe an ounce.

Cataplasma Diaphoreticum D. Gul. Cuninghami Medici.

Rec. Foliorum Sambuci, Salviae, Rutae, Althae, Chamomilli, ana. m. ii.

Wuse and cut these small, and boile them in the decoction of Linseed and Fenegreke, and when they haue boiled untill they be tender and soft, adde to them Olei irini, Anethini, Castorij, ana. one ounce and a halfe.

Boile them againe together, and make a Cataplasme according to art.

This Cataplasme is good to resoltie & mollifie all hardnesse of ioyntes, and grosse and stumie humours which are impact in the same. Therefore it is profitable in passions of ioynts, Chiragra, Podagra, and Sciatica, and such like. Also it may right well be vled in colde tumours infesting the musculous parts of the armes and legges.

The second booke of

Aliud Valentius eiudem.

Rec. Radicum & foliorum Ebuli, Altheę, ana. m. i. Foliorum Rute, Sabine, Pulegij, Sambuci, ana. m. sc. Chamęmeli, Meliloti, ana. m. ii.

Use these being cut and brused in one part of Malmesey, and thre partes of oyle of Camomill, vntill they come to the substance of a Cataplasme, &c.

This Cataplasme is of like vertues with the other going before, sauing that it is of greater force and strength in the effects before remembred, &c.

Cataplasma anodinum, nostrę inuentionis.

Rec. Foliorum Iusquiami, Violarum, ana. j. m. Boyle them in water vntill they be soft, then stamp them fine, & adde to them Panis puriss. one pound. Lactis, one pound. Olei rosati, three ounces. Vitella. ouorum numero. iij. Croci, one scruple.

Make hereof a Cataplasme according to arte. This Cataplasme or Pultas is verie excellent in ceasing of paines in the gout, of cholerike persons, where great inflammation is, & in a sensible & tender bodie. For it doth both assuage paine and remoue swelling in short time, if the bodie be well prepared before.

Cataplasma Rogerij.

Rec. Farinę fabarum, one pound. Furfuris subtiliter puluerisati, ii. m. Stercoris caprini, one pound. Chamęmili, Meliloti, Absynthij, ana. m. sc.

Stampe your hearbes fine, and boile them all together with sufficient white Wine, and lee of Barbers. Boile it vntill it come to the forme of a Cataplasme, and applie it so hot as the Patient may suffer it. This Cataplasme is of great resolution in windie matters of the wyntes, for it both resolue and disperse the winde and watric matter,

tier, and speciallie if you put to it a litle Cummin in fine powder. Some vse to put in more Wine and Ale, and no Beane meale nor branne, and so boile it with hearbes and other thinges, as is before sayde. Then straine it, and with the licour being hot, and sponges applied to the iunctures, and so roll it according to arte. I haue seene this doe verie well.

Aliud Cataplasma.

Rec. Foliorum Maluarum, Violarum, Mandragoræ, Inquiami, ana, m. i. Radicis Altheæ, Seminis Lini, Tœnogræci, ana, two ounces. Florum Chamomeli, Meliloti, ana, one ounce.

Boile all your hearbes in Potage without Salt, then stampe them finelie and put to the rest of your thinges in powder. Then boyle all together with the bꝛeth aforesayd. And make thereof a Cataplasme according to art.

This Cataplasme is verie good to cease inflammations and paine in mixt mattier both of bloud and choler, if you adde to it Vnguentum Populeon, two ounces.

VVaters.

Aqua Balsami.

Rec. Terebinthine, foure pound, Olibani, two ounces, Ligpi Aloes, two dragmes, Mastiches, Gariophillorum, Galange, Nucis muscata, Cinamomi, ana, one ounce and a halfe, Gummi elemi, sixe ounces. Aloes hepaticæ, Laudani, Castorij, Radicum consolide minoris & maioris, ana, two ounces, Foliorum hyperici, Betonicæ, Chamepitios, ana, m. f. Aquæ vitæ, iiii, times filled, sixe pound.

Make all those things in Powder that you can make in Powder, and mire them well with the rest. Then put them all into a bodie of Glasse with the Aqua vitæ, and let

D. iiii.

them.

The second booke of

them stand so the space of seauen daies close covered. Then set them to still with a soft fire according to art. First, you shall haue a cleere water called water of Balme, which you may receiue a parte, and when the coulour of the water chaungeth some thing to yellownesse, than keepe that water a part, and put vnder another receiuer to take the next liquor, which will be like to a yeolow water, then you may increase your fire by little and little, till you perceiue drops of oyle come forth, which oyle will be yeolow also, then you may remoue that receiuer, and put vnder another to take the balme, which will come after that oyle & water, which Balme will be more thicker and redder than the oyle, and it will come of it selfe without water. This Balme is verie precious, and is called arteficiall Balme. Now the oyle that I spoke off before, that came with the yeolow water, is called the oyle of Balme, and it will swimme aboue the water, so that you maye diuide it from the water at your pleasure. And this oyle is most precious in Paralyses and Spasmus, coming of cold matter, as I haue many times proued. The water of balme is verie precious, an old Alchimist did distill it againe with raine water, so much of one as of the other, & called it the Ladie of all medicines, for it is of great vertue in resisting the plague, poison, and many other things, if it be taken with Ale Beere, or wine, fasting, the quantitie of fiftene or twentie drops, in one spoonfull of anie drinke aforesaid, but I haue vsed it for a remedie against the plague, after this manner: Take of the leaues of Rue, Wormwood, Scabious, Turpentine, Mari-goldes, and Dragance, of each two ounces, and put them into one quart of the water so distilled, with raine water, the space of three daies, and in that time the water will take all the vertue from the hearbes, so that it shall not haue the vertue of those hearbes, but all the vertue it had in it selfe before. And thus I vsed it to the great profit & safegard of many. If I should write all the meruailous things that I haue done with this water, Oyle, and Balme, it were to be meruailed at, and yet most true. As concerning the vse and commoditie of them, you shall finde in diuerse of my bookes

as cause both require.

Lac Virgineum.

Rec. Litharge of siluer in fine poudre, three ounces, of good white vinegar, halfe a pinte, mire them together, and distill them by a silture, or throught a little bagge, or by a peece of cloth, take of the same water, mingle it with water of salt, made with one ounce of Salt poudred, and halfe a pound of raine water or Well water, and mingle these waters together, and it will be white like milke, and with this rub the corrupt place. Some addeth a little Cerase with this Litharge, which is good for all rednesse of the face.

Aqua corrodens.

Rec. of Sal alkali, or if ye cannot haue that, take Sal Armoniacke and vnslaked Lime, ana, one pound, and beate them to fine poudre, and put them in an earthen pot which hath holes in the bottome like to a Coliander, & presse them strongly downe, so that the water may not swiftly passe throught, and poure vpon them so much water as wil couer it a finger height aboue the poudre, and so suffer it to drop or straine throught, and put vnder it a receptacle to keepe the water, and when all the water is runne throught, renne or take new Lime and new Salt, as is aforesayde, and let the foresayd water runne throught the same, and keepe that water for your vse. This water is good in many operations, it will canterise like an hot yron, and it is good in fistules, and to many other things, if ye adde to this of Mercurie sublimate in poudre one ounce, it will bee the better, and chiefly in Chameleontiasis, wher the bones be corrupted.

Aqua Mercurialis.

Rec. Mercurij sublimati, Salis armoniaci, ana, halfe a pound.

Grinde them vntill fine vpon a moller stone both together,

D. 5.

ther,

ther with out any other licour, and put ~~that~~ in a strong Glasse, that will abyde the fier. Then take a newe earthen pot, and put ashes into it, the thicknes of one finger. Then shut your Glasse in the pot, and fill vp the pot with ashes round about the Glasse, so that the Glasse may stand fast within the pot. Then put your pot with the Glasse so sette in it, into a Forge, and make vnderneath it a fier, and close the mouth of the glasse with some linnen cloth, not too hard for breaking of the glasse, and sometime open it to giue vent. And you shal know when it is boyled enough, by putting in of a knife or some other instrument of Iron, and if it be boyled enough, it will cleaue to the knife, or instrument lyke to molten Pitch. Then take it from the fier, and let it stand vntill it be colde, then breake the glasse, & take the substance that you finde in the same glasse, and make it in fine poudre once againe vpon a moller stone. Then let it stand a day & a night in an earthen vessell put a broad, very thinne, that it may take the ayre, and become moyst, then put it in a bagge and hang it vp, that it may drop in to a vessell of glasse, and that water will be very cleare, and is called Aqua Mercurij. This water maketh Copper white, and all other mettalles, and is of a meruailous operation, it will cure a fistule if it be put to the bottome thereof by art, for it taketh away the hard flesh which letteth the fistule to be made whole.

Aqua ad oris Vlcera.

Rec. Hordei extorticate, M. j. Foliorum Saluie, Violarum, ana, M. j. Rosimarine, M. f. Mellis, iij. sponesfulls. Aluminis, two vneces.

Boyle all these together in one gallon of water till the better halfe be consumed, then straine it, and lette the sicke man continually wash his mouth with it warmed till he be whole, it is good for those that hath a sore mouth which cometh by reason of applying the vnguent used in Chamaeleontiali, in which vnguent Argētum viuum is put, and the more the patient spitteth and washeth the better it is.

Alia

Alia aqua pro eodem.

Rec. Roris marinae, Saluie, ana. M.iiij. Lupinorum, M.ii.
Aluminis, foure vnces. Mellus, halfe a pound.

Boyle all these together in foure gallons of water, vntill the halfe be consumed: Then let it stande vntill it be colde, and straine it, and keepe it in an earthen pot to your vse. This water serueth for the lyke purpose, that the other aforesaid serueth for, and is a great excicative. It healeth Cankers in the mouthes of children, and in olde folkes also, if it be mixed with Vnguentum Egiptiacum, more or lesse, according to the disease.

It is good also to wash cancerous blcers, if you put thereto a little Egiptiacum, aforesaid. For it preserveth the Ulcer from putrefaction, if other conuenient medicines be applyed therewithall.

It dyeth vp also olde sores being mixed as is aforesaid, if they be not deepe in the flesh, many other good properties it hath, which you shall finde by experience thereof.

Aqua ad mundificandum vulnera, nostrae
inventionis.

Rec. Agremoniae, Hyperici, Centaurij, Absinthij, Scabiosae,
Crassulae maioris, Radicis Symphiti, ana. j. M.

Stampe all these wel, and let them boyle with one gallon of water, and one pottell of white Wyne, and halfe a pound of Sugar, vntill halfe of the lycour be consumed. Then straine it, and keepe it to your vse.

This water must be conueyed into the deepe places of wounds or blcers with a syringe, made so warme as the patient may suffer it. And if you will haue it of great mundification, adde thereto Mel Rosarum. And if you will haue it of greater excication, and some thing to cole and put away inflammation, adde vnto it when you will occupie it, halfe so much plantain water, or nightshade water, wherein a little Alum is boyled.

This

This water is excellent in operation, for it cleanseth fro
the deepe partes all ~~woundes~~ and filthie humours, and cau
seth the other medicines that are applied to the soze places
to take the better effect in their operation, you maye min
gle also with this decoction Vnguentum Egyptiacum, or the
ponderat Mercurie precipitate, according to your descrip
tion. ~~It is also good for the cure of the~~
~~in wounds~~ alwaies, that all other good inuentions requi
red in the arte of Chirurgerie, be obserued and kept, chiefie
the euacuation of the mattier that they growe of, or that
maintaineth them, and also to keepe such diet, as is meet for
the curing of that disease.

Potio ad vulnera conglatinanda, nostrae
inventionis.

Rec. Polipodij quercini, foure ounces. Crissulæ maioris,
Pirolæ, Anance, Pilosille, Veronicæ, ana, two ounces. Solisse
qui, Agrimonie, ana, one ounce.

Chop all these hearbes small, and put them into a newe
earthen pot, and put thereto one pottell of the best Palm
sey that you can get, and one quart of water of Scabions,
and seeth them in Balneo Marie, by the space of thre houres
together, and in anie wise let the pot be close couered, and
passed about with some dow & bzan, that no breath go forth,
and if the wound be in the head, put in a little Sage, Beto
nie, and Lauender spike, and if it be in the brest, & through
the lungs, put in a little Lycorice, Hyslope, and Enula cam
panie roote, if it be about the raines, put in a Parslie roote,
and a Fenell roote, when all these thinges are boiled toge
ther, let it stand by the space of one night after, then open the
pot and straine forth the licour, and put therevnto of fine
Sugar foure pound, & boile it a little againe. This drinke
is most excellent for the curing of wounds that be in the bo
die, or through the bodie, for it healeth them in short time,
and consumeth alwaie the bloud that is within the bodie
without anie grieve or paine, in a manner they neede no
other remedie. For if they wash the wound with this same
drinke

drinke a little warmed, & lay a wet cloth vpon the wound
foure or fve double, wet in the same drinke, it will heale
it in very short time without any other medicine, drinke
euery morning and euening foure vnces at either tyme of
this same drinke warmed.

This drinke hath bene well proued in the warres both
by sea & land, by me Thomas Gale Maister in Chirurgerie
in the Citie of London. Prouided alwayes, that the patient
be kept soluble, and vse a very final dyet, vntil the seuenth
day be past, and so to be well gouerned in all other things
appertaining to his health, according to the art of Chirurgie.

Alia potia pro eodem nostræ inuentionis.

Rec. Hordei excorticati, Agremonie, Hissopi, Bethonica.
Polipodij, Symphiti, ana M. s. Plantaginis, Centumnodiorum
ana M. j.

If you may not haue these herbes grene, take them dry,
you must put in also, Hyperici, Scabiosæ, q. s.

Boyle all these herbes together with your Barley, in
thre pottells of water, with foure sponesfulls of Honey, till
the better halfe be consumed, then let it stand till it be cold
and straine it. This drinke must be vsed morning and eu-
ning warme, at eche time sixe vnces, with this he did mer-
uailous cures, and healed them in short time, for this drinke
defendeth the wound from euill accidentes, if the patient
keepe good diet, and other things necessarie for his health, as
is sayde befoze.

Aqua decoctionis ligni Sancti nostræ inuentionis
pro de Morbo Galico, per Thomas Ga-
lus, Chirurgus Londoniensis.

It is to be considered that there be thre sortes of this
woode, that is to say, that that is very olde, that y is meane
and not olde, and that which is young and the bowes of the
trees, & euery one of these doth differ in qualitie from other,
for that that is young with the bzaunches also, are of more
moyst and airie substance, then the other two be, and that
that

The second Booke of

that is olde is moze harder of digestion & slower in his operation, and longer or any cure may be done with it, wherefore we doe commonly vse that which is young and whittest, with the barke of the same, for it doth not dye away, the natural moisture of mans body, so sone as the olde doth, and that is by reason of his moistnesse, yet in his propertie he doth as much as the other, the olde & blacke wood is good to make oyles, and such lyke things, either by decoctions, or by distillations, for it is more fat and Gummi then the other is, except it be rotten, & that is not good in medicines.

This wood hath a singuler propertie against Chamæleontiasin, and also against manie other moist and rumaticke sicknesse, for it letteth putrifaction, and altereth the euill qualities of the humours, it comforteth the stomacke, and openeth the obstructions of the liuer, and moueth the bodie to sweate, and helpeth nature to put forth manie perillous and contagious vapours by the powers outwardly.

Also that which is the oldest, being boyled in decoctions and other wayes, by art prepared, is verie good for vlcérations, fistules, ache or paine, being applied according to the arte of Chirurgerie, as is mencioned in this booke in diuers places.

And first of all to make the decoction to drinke inwardly, you shall vse the youngest wood or the bzaunches with some part of the barke of the same, as it followeth here.

Take one gallon of faire water, and put into a newe earthen pottle, the which may holde three gallons of water, or two gallons and a halfe at the least, and put therein of the youngest wood aforesaide, with some of the barke, one pound in powder, Licorice brused, two ounces. Set them vpon a fewe coales, the pot being close couered till it be verie hot, then take it of the fire and let it steape twelue houres. Then boyle it vpon a soft fire, the pot being close couered, that so little of the ayre may passe away as is possible, till the halfe be consumed, then straine it and put it into a faire vessell.

This is the strong drinke which they may drinke off, morning and euening, at eache tyme eight ounces, and euery
rie

the morning the sicke person to sweate after that he hath taken of the same drinke, by the space of two houres.

And for the second Decoction, which he must vse with his meate, you must put to the same wood that you straine from your first decoction so much water as you did before, and let it stande and steepe as is aforesaide, in the same pottle, by the space of twelue houres, and then boile it till the halfe be consumed, as ye did the other before.

In weake bodies and colde, we haue vsed to put in the first Decoction one pinte of Palmesie or Sacke, a little before that it be taken from the fier, and in the latter drinke we haue vsed to put in rackt Rensish wyne.

But in the stronger bodies and those that be not so weake, we vse to giue it alone without wyne.

The bodies must be well prepared before they take this Drinke, or enter into the rules of this diet, by the space of twelue or fouretene daies, in the which those humours may be purged, that doe hurte the bodie or mainteine the disease, and then when the bodie is well purged, they may enter into the same diet, geuing them no other drinke, but of this same abovesayde, and deminishinge theyr meate by little and little, vntill the sixte daye be past, then lette them haue so lyttle meate as they maye lye with all, for if they shoulde take muche meate, nature shoulde be so occupied aboute the digestion of the same, that it should not be able to overcome and digest the sicknesse: either else, such quantitie of humours might growe thereof, that might still prolong and maintaine the dysease.

Yet neuerthelesse, those that bee Cholericke bodies, maye take more meate and moyster meates, then those which be Phlegmaticke and moyst bodies.

Generally, theyr meates must be roasted, and of good nourishment, and easie to dygest, as Dutton, Weale, Capons, Rabbettes, Chickens, Fesants, Partridges, Blacke Byrdes, Thrushes, and other small byrdes of the Wode.

This

The second booke of

This must be onely their meate, and roasted without salte, except in cholericke bodies that be lyke to fall into some feuer, they may haue their meates boyled, & eate them with a little Merinse.

In Phlegmaticke bodies they may forbear their supper, and hold them content with one meale a day, except at night a few Nelsons and blanched Almonds.

But Cholericke bodies must haue some meate at night to satisfie their stomacke withall, bicause they will soner digest it, and hath no such quantitie of moist humours, as the Phlegmaticke or Sanguine person hath. Their bread must be onely Biskit, made with a fewe Anyseeds & Sugar, without Salt. They may take of this bread more or lesse, according to the strength of their stomackes and complexion, as is aforesaide.

This dyet or order must be kept by the space of xl. or l. dayes, more or lesse, according to the necessitie of the sickness, & euery first day the bodie must be purged with some gentle medicine, mete for the disease, and for the complexion of the man. That day y they take their purgation, they may not drinke their drinke, nor sweate in the morning, nor no tyme that daye, all other dayes they must sweate, for in sweating is the chiefest matter, that is required in the manner of cure. They must vse all other manner of necessarie things, as sleeping, quietnesse, good companie, and conuenient place, and aboue all things to be kept close in all tyme of their cure, least that the ayre might enter in, and stoppe the powers and let them to sweate, and doe them other displeasures.

This meanes of curing is most praised of many of our latter wyrters, and chifely of one Hutton a Germaine, of Nicolas Massa, Ioannes Baptista Montanius, Anthonius Galus, Alfontius Farariensis, Anthonius Musa, Muchellus Belogenis, Leonardus Fuchsious, Ioannes Tagaletius, Dominicus Leanus Luencis, and of many other more, which were very long to rehearse, they haue written all in the commendation of this wood, but in effect, they haue concluded in the vsing of it, as I haue made mencion here aboue. And I my selfe hath

hath found great profit and gotten great worship thereby, I inuented my selfe a sirupe, which I made with this same decoction, strongly boiled with Sugar, so much in weight of one as of the other, boiled till it come to a sirupe, with the which sirup I did manie great cures, and chieslie when the patient was verie weake, as you shall finde moze hereafter in my booke. And thus we end this Chapter, for the which the name of God be praised.

Potio ad vulnera recentia Brunswicensis.

TAKE Iule leaues, or Edera arborea, growing on an oken tree, foure ounces, Winter greene, small and greate, or Virola, in Latine, Samicle or Diapensia, Syndan, Herba fortis, or Veronica, ana, ii. ounces, Herba solequij, one ounce. Chop all these together verie small, and put them in a pewter pot, and put thereto foure pound and a halfe of the best wine, and of water one pound and a halfe. And ye shall seeth them in Balneo Mariae thre houres long, without taking off the Lyd of the pot, then on the morrowe after put thereto eight ounces of Sugar. If the wound be in the head, then put thereto Betonie, two ounces, Sage, one ounce, Lavender, halfe an ounce. And if the wound be in the breast, then put thereto, Licorice, two ounces, Polipody, one ounce, Aslope, halfe an ounce, and if the patient be feeble and sore, then put thereto Buglosse flowers, Borage flowers, ana, i. ounce. Roses, halfe an ounce, then if the patient haue great heate, put thereto violets, two ounces, flowers of Penusar, halfe an ounce. If the wound be on the left side, do thereto liuerwort, one ounce, Matrisilue, halfe an ounce. Also if he be not soluble, then it is needfull to put thereto of Sene leaues, Cassia fistula, ana, two ounces, and if he be deepe wounded, then put thereto Celidonie rootes, foure ounces, and giue it him to drinke at morning, at noone, and at euening, and at euerie time, foure ounces.

The second booke of

Alia potio eiusdem, pro eodem affectu.

R. Matrifilue, Pilosillæ, Nausturtij, Brunelle, Plantaginis, ana. m. i. Rute, Matricarie, Chelidonie. ana. m. i. Herbe sarasenicæ. m. i. se. Diarentie, Herbe tunici, ana. m. i. Saluie, m. se. Serpentinæ, Dictami. ana. two ounces. Castorij, Mumia, Myrrhæ, Absinthij, ana. halfe an ounce.

Put all these together in a pot with good white Wine, and couer the pot with a lid, and close the lid with dough, and in the lid make a small hole, and stoppe it with a tap of woode, and let it seeth till the third parte be consumed, and drawe the tap sometime out, that ye may smell when it is inough. Of this giue the patient to drinke at morning and euening a spoonfull, and though the Patient be meetlie in health, yet shall he not drinke the lesse, & he shall in his daye lie drinke, meddle thre or foure drops of the same.

Aqua imperialis contra pestem.

Rec. Radicis Brionie, Gladiolæ, Angelicæ, Turmentillæ, Lapatij, Dragustij maioris & minoris, ana, two ounces, Corticis fraxini, Guaiaci, ana, one ounce.

Gather your rootes in March, and picke them cleane, then stampe them with the barks aforesaide, and put them in strong Malmsey, the quantitie of foure pound, or a pottell in a close pot. So let them stand infused untill the later end of May, then gather these hearbes following.

Foliorum scabiose, Betonicæ, Minthe, Verbenæ, Turmentillæ, Calendule, Pimpenille, Rute, ana. m. ii. Foliorum Angelicæ, Dragantæ, Absinthij, Saluiæ, ana. m. iiii. Hyperici, Pionie, Valeriane, Endiuia, ana. m. i.

Use all your hearbes, and put them infused in one quart of strong vinegar, one quart of Rose water, and one quart

to the Antidotarie.

quart of good white Wine, three daies. Then still them in a common still, and keepe this water to your vse, for it is most precious against the pestilence beeing mixed with good Metridatum or Triacle, and giue sixe spoonfulls euerie day both to the sicke and whole.

Aqua corrodens alia,

R. Salis gemmæ, Salis alcali, ana, three ounces, Aluminis scissilis, vi. ounces.

Make these in fine powder, and put them in a Gallon of Smiths water, and boile them on the fire, and reserue this to thy vse. This is verie good against filthie and rotten blcers, hauing inflammation ioyned with them, as experience both hath and can testifie.

Aqua nobilis in oculorum vitijis.

Rec. Fæniculi, Rute, Betonicæ, Chelidonix, Verbenæ, Euphragix. ana. ii. m. Rosarum rubearum, xii. M. Ligni sancti, lib. ñ.

Bruse these, and put them in a new earthen pot with a quart of white wine. Let these be thus infused two daies, after put to them Aluminis, iii. ounces, Salis gemme, 3. ii. Mastiches, Vitrioli, ana. 3. i. Olibani, Myrrhe, ana, one ounce, fl. Make these in powder, and put them with the other parcels into a still of glasse, and put his head on it, and lute them well together, and set a ruptorie also to it, well closed to the spout of the head, so let them stand one daie, after distill them in Balneo Mariæ, according as arte requirerh.

This water remoueth the white spots in the eies, and draineth the fluxe of humours which haue recourse to the eies, and is right excellent in other griefes of the same, as hath bene certainlie tried not long since, in a childe of the worshipfull Maister Gunstones of London, which hauing soze eyes, and diuerse sundrie medicines to them applyed, dyd nothing preuaile, but brought the eies into woyle

The second booke of

case : insomuch that some learned in Physicke counsailed the parents to boare the skin of the necke thzough with an hot yron, that the humours ascending might breath out, or else to purge the head with pills, & at the least to make diuersi- on of humours. But in fine, nothing preuailed, & so the child was left to the worke of nature. Then M. Gunstone seeing her childe voide of helpe & comfort, was yet not in dispaire, but hoped that God would send some remedie. So she found an olde booke, in which this water aboue said was contain- ed, & for the perfecter distilling thereof she did require my helpe, which willinglie I graunted, and distilled the water, of which thre or foure times she did drop a little into the childes eies, by which vse and continuance the inflammati- on was put awate, the flure of humours staid, the white spots and webs consumed, and the childe eies restored (than- ked be God) to their perfect health and sight. Which water for the excellencie and noble vertues, I thought good to set out for the comfort of such as shall haue the like infirmitie. I haue with this water done many good cures since y time, and haue of my selfe added vnto it moze than was in sir William Firminghams booke, who was well learned in Chi- rurgerie, and authoz of this water, the roses, and Lignum sanctum. He flourished in the yere of grace, 1475.

Alia aqua preciosa in iisdem oculorum morbis.

Rec. Foeniculi, Verbenę, Saluie, Agrimonie, Betonica, Ru- ta, Chelidonia, Eufragia, Calaminthe, Pimpinella, Scabiosa, Chamedryos. Use your hearbs, & put to them one quart of white wine, and a pint of water of red roses, also adde A- luminis, foure ounces. Tutie, two ounces. Caphure, iij. drag- mes. Make these in powder, and distill them in a common still, and when you haue once distilled them, put the water vpon the feces, and distill it againe, and then reserue it to thy vse. This water is right precious in rumatike bodie & inflammations of the eies, and other like effects.

Aqua

Aqua sine pari.

Rec. Aqua vitæ quinquies distillatæ, iiii. li. Salis vsti, Sulphuris viui, ana. i. pound. Tartari albi, iii. ounces. Nucum In- glandis, Auellana, ana, foure ounces. Nitri, two ounces. Min- rhæ, Aloës, ana, one ounce. Gariophyllorum, Nucis muscate, ana, one ounce, fl. Corticum limonum, arangie, ana. vi. ounces. Betonice, Verbenæ, Agrimonie, Hyperici, Fœniculi, Valeria- næ, Scabiose, ana. i. m. Rutæ, Absinthij, Menthe, ana. m. j. Ra- dicum angelice, Zedoarie, Tormentillæ, Acori, ana. i. ounce & a halfe. Florum genestæ, foure ounces. Rorismarini, Camo- millæ, ana, two ounces. Theriaces optimæ, ʒ. iii. Sem. Anisi, Peonie, Petroselini, ana. ʒ. i. ʒ. Use these y are to be brused, and put all together, and let them stand six daies, after di- still them according to art, and if that you doe againe distill them on the feres once or twice, you shal make the water of much more effect and vertue.

It is excellent against venime, poison, and pestilence, it doth keepe the humours and bodie from corruption and put- trefaction, and that experience can right well testifie. The proportion or quantitie, is to giue one spoonful with a cake or two of Manus Christi, or in cholerike and sanguine com- plections, and hot regions, times of the yeare, with sirupes of Buglosse or Tiolets, &c.

Thus endeth the Antidota-

ric, compiled and published by Thomas Gale, Maister
 in Chirurgie. 1563.

FINIS.

P.iii.



A profitable Table, containing all the differences

Place this
Table in
folio. 12.

Simple, ther
are ii. kindes.

{ Hot ther
are ii. in
number.

Phlegmone

Erisipelas,

{ Cold ii. in
number.

Oedema,

{ Scirrhus.

every tumor
mans body
either

1. According
to Nature.

1. Humoralis
comming of
humours, of
which there
are ii. kindes

2. Aboue
Nature.

Compounds
springing of
many hu-
mors mixed
either

3. Against
Nature of
which there
are iii. kinds,
that is to say

2. Flatuofus
which com-
meth of the
windie spi-
rits, & are ii.

{ Timpanites.

{ Priapifinus.

Equallie. { all iiii. humors
& the tumour
taketh name
of them all.

{ ii. together as

Inequallie, as when
there is mixed with

3. Varius called because
it is sometime of humors,
sometime of spirits, and
sometime of both: such
are

Vitiligo, Exāthemata, Pa-
rotides, Mētagra, Epiplo-
cele, Enteroccele, Enteroc-
piploccele, Bubonoccele,
Exomphalos, Arthritis,
Podagra, Chiragra, &c.

of Tumours against Nature.

Vnto Phlegmone: Phygethlon, Bubo, Phyma, Do-
thienes, Anthrax, Gargareon, Paristimia, Aneuris-
ma, Gangrena, Sphacelus.
Vnto Erisipelas: Herpes, Esthiomenus, & Miliaris,
Phlyctæna, Epinyctides, Hydroa, &c.
Vnto Oedema: Atheroma, Steatoma, Meliceris,
Hydrocele, Ascites, Leucophlegmatia, Chæras,
Broncocale, Hydrocephalon, &c.
Vnto Scirrhus: Cancer, Elephantiasis, Satyriasmus,
Pfora, Lepra, Enchimonion, Melasma, Varices, Sar-
cocale, Polipus, Verruce, Acrochordones, Myrme-
cia, &c.

Bloud & { Coller. } and is { Phlegmone & Erysipelas.
Fleme. } cal. { Phlegmone & Oedema.
Melanc. } led { Phlegmone & Scirrhus.

Coller & { Bloud. } and { Erisipelas & Phlegmone.
Fleme. } is cal- { Erisipelas & Oedema.
Melach. } led { Erisipelas and Scirrhus.

Fleme & { Bloud. } and { Oedema and Phlegmone.
Coller. } is cal- { Oedema and Erisipelas.
Melach. } led { Oedema and Scirrhus.

Melan- { Bloud. } and { Scirrhus and Phlegmone.
cholic & { Coller. } is cal- { Scirrhus and Erisipelas.
Fleme. } led { Scirrhus and Oedema.

Bloud. { Coller. } and { Phlegmone Erisipelatodes
Fleme. } is cal- { Phlegmone Oedematodes
Melach. } led { Phlegmone Scirrhotodes.

Coller. { Bloud. } and { Erisipelas Phlegmonosum
Fleme. } is cal- { Erisipelas Oedematosum.
Melach. } led { Erisipelas Scirrhotosum.

Fleme. { Bloud. } and { Oedema Phlegmonides.
Coller. } is cal- { Oedema Erisipelatodes.
Melanc. } led { Oedema Scirrhotodes.

Melan- { Bloud. } and { Scirrhus Phlegmonosus.
cholic. { Coller. } is cal- { Scirrhus Erisipelatosus.
Fleme. } led { Scirrhus Oedematosus.

*These Tumours take their names first of the
humour which formeth it in the mixture
and next of that which is with it mixed.*

AN EXCELLENT TABLE, DECLARING the differences of wounds.

Place this Table in folio. 22.

1. Of the nature of the part in which the wound is made : as in	Similar part, of which there are iij. differences, for it is either in	1. Soft part,	{	Flesh.	}
		as in	{ Fatnesse }		
		2. Hard part	{	Bones	}
2. Of the effe of solution of continuie.	Instrumētall part: so is it either in the	as in	{ Ioynts }		
		3. Neither soft nor hard, as in	{	Veines.	}
			{	Arteries.	}
3. Of the difference of solution of continuie :	Simple wound.		{	Nerves	}
			{	Tendons	}
			{	Ligaments.	}
The principall difference of woundes are taken of iij. thinges : that is to say	Cōpound.	1. Principall part: as in the	{	Hart	}
		2. Seruing the principal parts, as in	{	Liuier	}
		3. not seruig the principal parts	{	Brayne.	}
3. Of the difference of solution of continuie :	Quantitie & the wound is called		{	Aspera arteria,	}
			{	Throte.	}
			{	Bladder.	}
3. Of the difference of solution of continuie :	Figure, as		{	Nose.	}
			{	Eye.	}
			{	Hand.	}
3. Of the difference of solution of continuie :	Figure, as		{	Foot.	}
			{	Sc.	}
			{	Wound.	}
3. Of the difference of solution of continuie :	Figure, as		{	a great or litle	}
			{	a long or short,	}
			{	a broad or narrow,	}
3. Of the difference of solution of continuie :	Figure, as		{	a deepe or shalow	}
			{	equall or inequall.	}
			{	a crooked or oblique	}
3. Of the difference of solution of continuie :	Figure, as		{	areolles.	}
			{	Wound, &c.	}
			{	Wound, &c.	}

Euery vlcer is either

simple, and the names
with difference
of these, spring
eth. v. sundry
wayes, that is
to saye, of
cōpōūd.

This Table
is to be pla-
ced in fol. 23

1. Humours
so be there
four.

Bloud.
Choler.
Flegme.
Melancholie.

and are
called of

Sanguine
Cholerike
Flegmaticke
Melancholke

Vlcers,

2. Sanies & the
vlcers called
hereof by .iiii
names, for of

Sanies.
Pus.
Sordicies.
Virulentia.

the vlcer
is named

a Sanious
a purulent
a filthie
a virulent

Vlcer.

3. Accidents or
symptomata
as of

Corrosion
Putrification
Dolour.

the vlcer
is called

1. a corrodig or
phagēdenical
2. vlcer putridū
3. vlcer dolorosū

Vlcer

4. Of sicknesse
as of

Intēperatnesse
Inflāmatō.
Erisipelas.
Cancer.
Fistula.

& taketh
to name

Dyscratum
Phlegmonosū
Erisipelatosū
Cancrosum
Fistulosum

Vlcer

5. Similitude
as of

Formica
Cauerna

it is
called

formicosum
Cauernosum

It hath di
uers names
according
to the part
it is in, as

1. Flebb
2. Venes
3. Arterie
4. Nerves
5. cartilage
6. Bones

cal-
led

carrosa
venosa
arteriosa
nervosa
cartilaginea
ossea. (sa

place this
Table in
folio. 25.

A Table containing the differences of fractured bones.

Eucrie frac-
ture of the
bone is ei-
ther

Simple frac-
ture of the
bone, of
which there
are iii. kinds,
that is,
1. Ouertwarts,
and they are
2. Raphanidō the bones
3. Sicyedon. ken like
Cucumbers.
Stalkes of hearbes
when as
Radish.

2. Rifts or fissures called Schidacidon,
3. broken in many small peeces, named Alphitidon.
Sicknes
as a frac-
ture with
inflammation
Erysipelas.
&c.
Albucasis nameth other diffe-
rences of Fractures: as a frac-
ture of the iawes, a fracture of
the nose, a fracture in Cranio,
a fracture of the spine of the
backe, a fracture of the folsiles,
&c. Which be no true differen-
ces of fractures, but rather no-
teth the part affected.

Compound
and ioyned
with it both.
Accidet
as a frac-
ture with
d colour, &c.

place this
Table in
folio. 26.

A Table of luxations and dislocations.

